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PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

CATERPILLAR INC.
MAPLETON, ILLINOIS
ILD 052 664 364

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

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EPA Region	:	5
Site No.	:	ILD 052 664 364
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EPA Region 5 Records Ctr.
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INITIALS MV

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EXECUTIVE SUMMARY

Resource Applications, Inc. (RAI) performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Caterpillar Inc. (Caterpillar) facility in Mapleton, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritization of RCRA facilities for corrective action.

The Caterpillar (formerly known as Caterpillar Tractor Company) facility is a grey iron foundry used for the manufacturing of engine and heavy equipment castings. The facility's Standard Industrial Code is 3321. The facility generates and manages the following waste streams. Some of the waste streams may be hazardous and nonhazardous and are so indicated. The waste codes listed are those assigned by the facility: waste refractory coating (D001, F002, U226, nonhazardous), waste resins (D001, D002, F002, U122, nonhazardous), waste core catalyst (D001, D002, nonhazardous), waste janitorial products (D002, nonhazardous), unused cooling tower chemicals (D001, D002, nonhazardous), waste off-specification chemical (U226), and nonhazardous waste triethylamine scrubber liquor, waste grease, waste oil, waste sand, dust waste, polychlorinated biphenyls (PCB), dewatered sludge, and nonhazardous phenolic wastewater. In the past, waste triethylamine scrubber liquor (D002) and waste grease (D008) were also generated. The facility has operated at its current location since 1967. The facility occupies 608 acres in an industrial area and employs about 800 people. The facility's regulatory status is that of a large-quantity generator and storage facility. Building B was started in 1967 and was occupied until 1986. Building D was started in 1978 and is presently in full operation. Before 1967 the area was unimproved open land.

The PA/VSI identified the following 13 SWMUs and four AOCs at the facility:

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Solid Waste Management Units

1. Waste Sand Landfill Area
2. Former Hazardous Waste Drum Storage Area
3. Indoor Hazardous Waste Drum Storage Area
4. Waste Oil Sump Area
5. Hazardous Waste Drum Storage Area
6. Facility Baghouse Dust Collectors
7. Wastewater Treatment System
8. Former Hazardous Waste Drum Storage Marshalling Area
9. Waste Scrubber Liquor Tank
10. Phenolic Wastewater Storage Tank
11. Former PCB Storage Area
12. PCB Storage Area
13. Temporary PCB Storage Area

Areas of Concern

1. Aboveground Storage Tank Split-Pipeline Leak Area
2. Sulfuric Acid Leak Area
3. Abandoned Aboveground Storage Tank Leak Area
4. Diesel Fuel Truck Saddle Tank Spill Area

Past history of the SWMUs has revealed documented releases to the soil. The fact that Caterpillar's personnel are more aware of the regulations than they were 10 years ago is one reason why future spills or releases are unlikely. A PCB spill occurred in 1984, during a fire in Building B. The fire was put out with water which was pumped out of the building and onto the soil, thus contaminating the soil with PCBs. After cleanup, Caterpillar received a letter from IEPA approving the method of cleanup.

The potential for release to ground water from all SWMUs, except SWMU 1, is low. SWMU 1 has an unknown potential for release of hazardous constituents to ground water because hazardous constituent content in the waste disposed in this unit is unknown. AOC 3 has a moderate to high potential for release to ground water due to the gasoline release to the soil in the area. AOC 1 has a moderate potential for release to ground water. A gasoline release to soil occurred here; however, this release occurred in 1982. AOC 4 has a moderate potential for release to ground water due to the diesel fuel release to soil in this area. AOC 2 has a low potential for release to ground water.

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The potential for release to surface water from all SWMUs, except SWMU 1, is low. There is also a low potential for release to surface water at all AOCs. SWMU 1 has an unknown potential for release of hazardous constituents to surface water because the hazardous constituent content in the waste disposed in this unit is unknown.

The potential for release to on-site soils from all SWMUs, except SWMU 1, is low. However, overflow releases have occurred at SWMU 10. The unit has since been removed and no longer poses a threat to on-site soils. SWMU 1 has an unknown potential for release of hazardous constituents to on-site soils since hazardous constituent content in the waste disposed in this unit is not known. Releases of gasoline have occurred at AOC 1 and 3. No soil remediation has been conducted at either AOC. A release of sulfuric acid to on-site soil occurred at AOC 2. Thirty 55-gallon drums of contaminated soil were removed; however, no soil sampling was performed to verify that all contamination was removed. A release of diesel fuel to on-site soils occurred at AOC 4. Some soil was removed, but no documented soil sampling was available to RAI.

The potential for release to air from all SWMUs, except SWMU 1, and all AOCs is low. SWMU 1 has an unknown potential for release to air because hazardous constituent content in the waste disposed in this unit is unknown.

Caterpillar is located in an industrial area. A small residential area is located approximately 0.5 mile away. Water in the area is obtained from the Illinois River, located on the south property line of the facility. Other surface water bodies in the area include: 1) the Little Lamarsh Creek, which runs through the center of the Caterpillar property between Buildings B and D and drains into the Illinois River, and 2) the Pond Lily Lake located approximately 1 mile southeast of Caterpillar's Building B and on the north side of the Illinois River. Wetlands are abundant in the area. The entire Caterpillar site was originally wetlands and was altered for the current land use. There are no ground water wells on site. The nearest ground water wells are in the Village of Mapleton, approximately 0.5 mile north from Caterpillar. Facility access is controlled by fencing, security guards, and video-monitoring.

RAI recommends that RCRA closure be completed for SWMUs 2, 3, 5, and 8 per approved IEPA closure plans. Soil sampling should be conducted at SWMU 10 to determine if contamination

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occurred as a result of overflows at the unit. Integrity tests of the tanks at AOCs 1 and 3 should be performed, and the soil around all AOCs should be sampled for contamination. RAI recommends soil sampling at SWMU 1 to determine if hazardous constituent contamination does exist. Furthermore, RAI recommends hazardous constituent analysis of the nonhazardous special wastes stored at SWMU 1. According to the facility representative, ground water monitoring at SWMU 1 has not identified any ground water contamination and the monitoring data is submitted quarterly to IEPA. RAI also recommends that a hazardous constituent waste analysis be performed on the waste dust stored in SWMU 6. If the waste is determined to be hazardous, sampling may be necessary for all environmental media. RAI recommends no further action for any of the other identified SWMUs.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC) received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 team member, provided the necessary assistance to complete the PA/VSI activities for the Caterpillar Inc. (Caterpillar) facility in Mapleton, Illinois.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility.
- Obtain information on the operational history of the facility.
- Obtain information on releases from any units at the facility.
- Identify data gaps and other informational needs to be filled during the VSI.

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA.
- Identify releases not discovered during the PA.
- Provide a specific description of the environmental setting.
- Provide information on release pathways and the potential for releases to each medium.
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases.

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Caterpillar facility in Mapleton, Illinois. The PA was completed on January 21, 1992. RAI gathered and reviewed information from the

Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. RAI also reviewed relevant publications from the U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS), U.S. Department of Commerce (USDC), U.S. Geological Survey (USGS), Federal Emergency Management Agency (FEMA), and the Illinois State Geological Survey (ISGS). The VSI was conducted on January 22, 1992. It included interviews with facility representatives and a walk-through inspection of the facility. Thirteen SWMUs and four AOCs were identified at the facility.

RAI completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 11 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

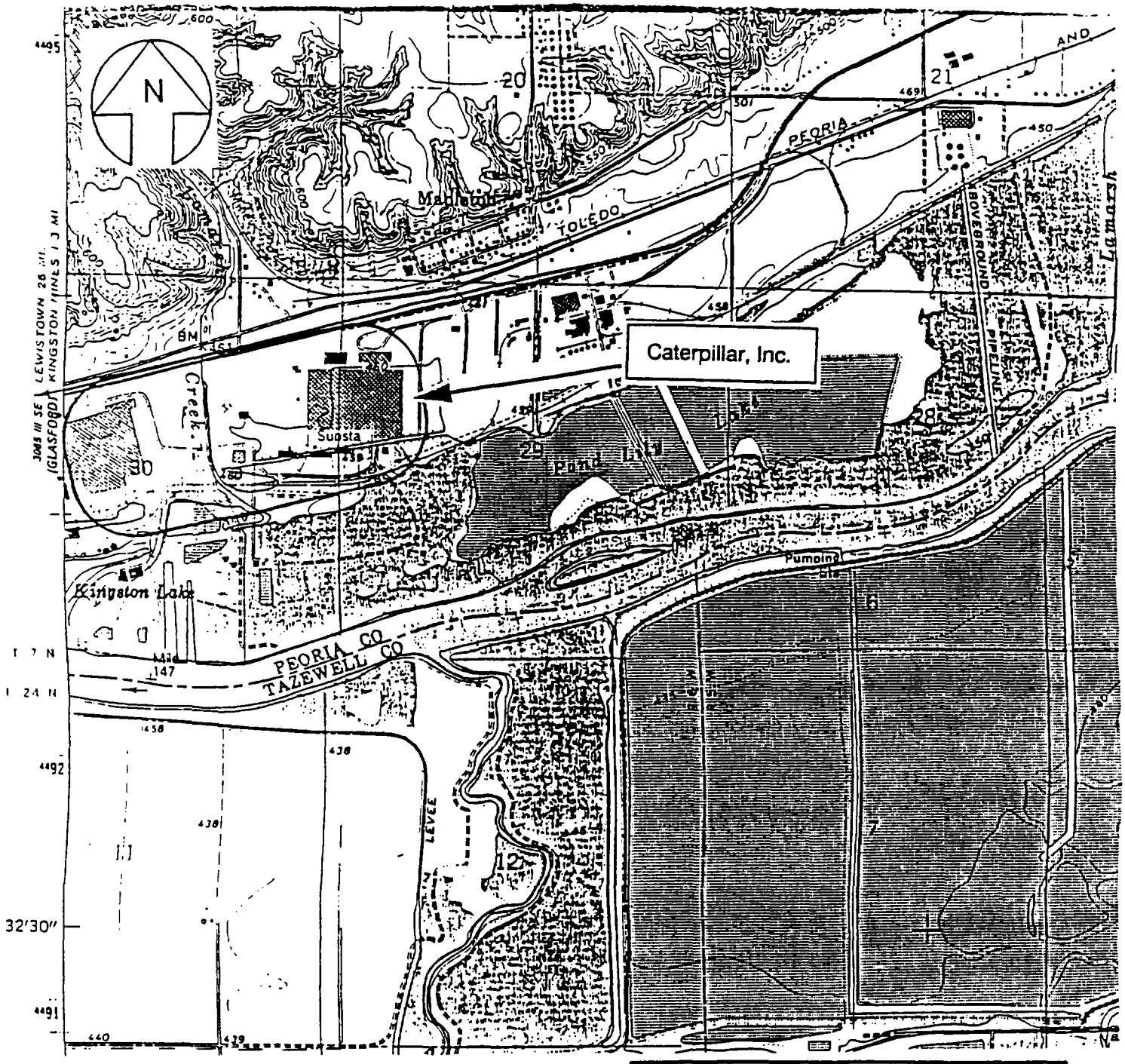
The Caterpillar facility is located at 8826 W. Route 24 in Mapleton, Peoria County, Illinois (latitude 40°33'35" N and longitude 89°44'08" W), as shown in Figure 1. The facility occupies 608 acres in an industrial area.

The Caterpillar facility is bordered on the north by U.S. Route 24/Illinois Route 9 and the Village of Mapleton, on the east by two chemical plants, on the south by the Illinois River, a barge terminal, and a warehouse, and on the west by open land and farmland.

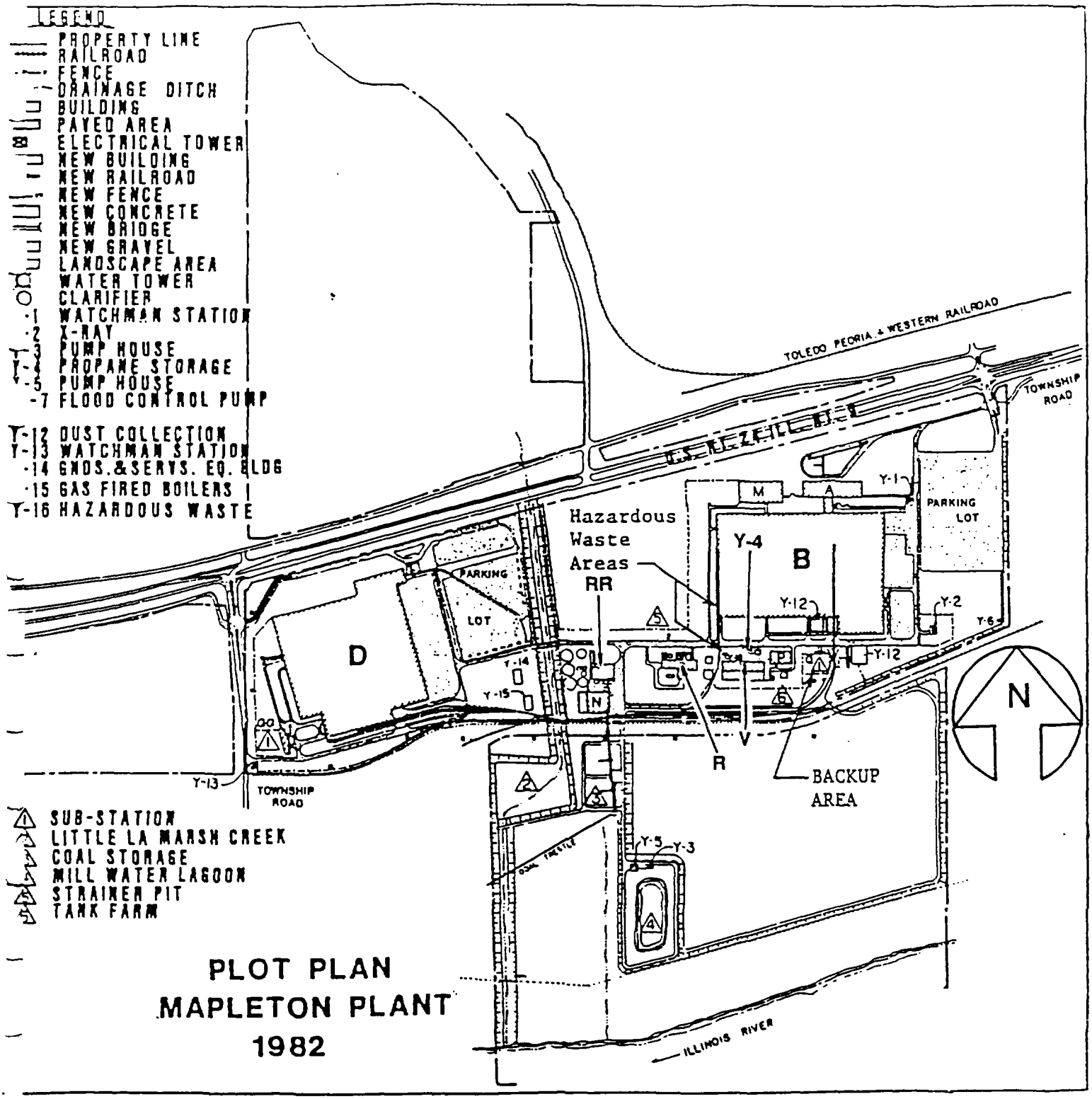
2.2 FACILITY OPERATIONS

According to the facility representative, Caterpillar started their operations in Building B in 1967 and operated until 1986. A new building, Building D, started operations in 1978 and is currently in operation. In 1986, the company incorporated in Delaware as Caterpillar Inc. and the name was changed to reflect the new status. The facility regulatory status is that of a large-quantity generator and storage facility. Before 1967 the area was unimproved open land.

Caterpillar ceased operations in Building B in 1986. When operating, this facility was a grey iron foundry used for the manufacture of engine and heavy equipment castings. Its Standard Industrial Code was 3321. A facility layout of Caterpillar is included as Figure 2. Figure 3 is an enlargement of Figure 2 and includes locations of SWMUs and AOCs. Table 1 presents the SWMUs identified at the facility.

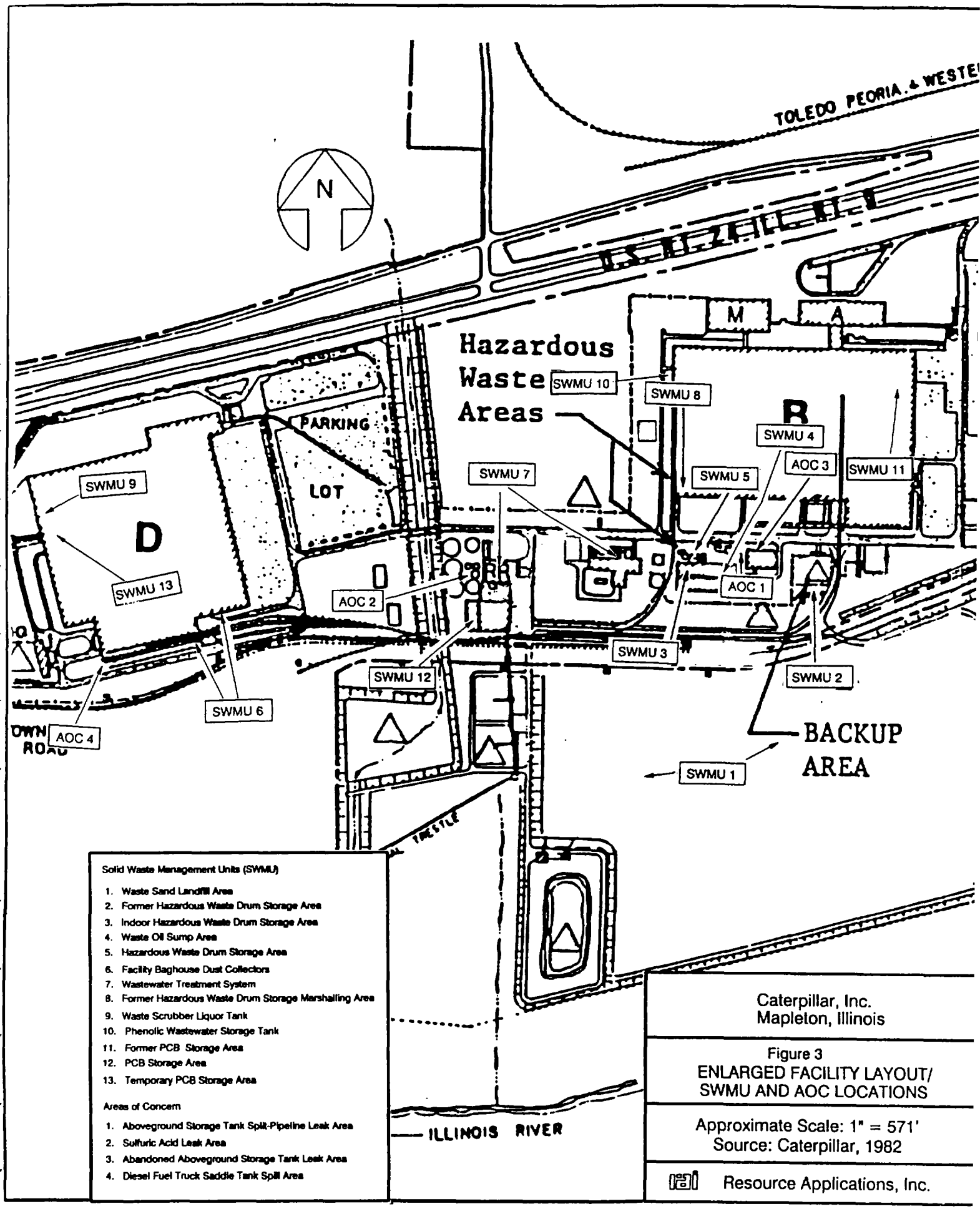


Caterpillar, Inc. Mapleton, Illinois
Figure 1 FACILITY LOCATION
Scale: 1:24,000 Source: Modified from USGS, 1979
Resource Applications, Inc.



PLOT PLAN
MAPLETON PLANT
1982

Caterpillar, Inc. Mapleton, Illinois
Figure 2 FACILITY LAYOUT
Scale: 1" = 1000' Source: Caterpillar, 1982
Resource Applications, Inc.



Caterpillar, Inc.
Mapleton, Illinois

Figure 3
ENLARGED FACILITY LAYOUT/
SWMU AND AOC LOCATIONS

Approximate Scale: 1" = 571'
Source: Caterpillar, 1982

Resource Applications, Inc.

TABLE 1

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
1	Waste Sand Landfill Area	No	Active, estimated year for final closure is 1995.
2	Former Hazardous Waste Drum Storage Area	Yes	Inactive, stored greater than 90 days, awaiting RCRA closure plan approval by IEPA.
3	Indoor Hazardous Waste Drum Storage Area	Yes	Active, greater than 90-day storage, awaiting RCRA closure plan approval by IEPA.
4	Waste Oil Sump Area	No	Active, less than 90-day storage.
5	Hazardous Waste Drum Storage Area	Yes	Active, greater than 90-day storage, awaiting RCRA closure plan approval by IEPA.
6	Facility Baghouse Dust Collectors	No	Active, less than 90-day storage.
7	Wastewater Treatment System	No	Active, less than 90-day storage.

Note:

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

TABLE 1 (continued)

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
8	Former Hazardous Waste Drum Storage Marshalling Area	Yes	Inactive, stored greater than 90 days, awaiting RCRA closure plan approval by IEPA.
9	Waste Scrubber Liquor Tank	No	Active, less than 90-day storage.
10	Phenolic Wastewater Storage Tank	No	Inactive, stored nonhazardous phenolic wastewater prior to on-site treatment.
11	Former PCB Storage Area	No	Inactive, stored PCB waste only.
12	PCB Storage Area	No	Active, stores PCB waste only.
13	Temporary PCB Storage Area	No	Inactive, stored PCB waste only.

Note:

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

The facility has operated at its current location since 1967 and employs about 800 people. The facility consists of many buildings, which are described as follows: Office (A) (61,640 square feet), Foundry (D) (1,519,660 square feet), Electric Switch House (Q) (3510 square feet), Electric Switch House (QQ) (11,450 square feet), Air Compressor/Waste Treatment (R) (40,815 square feet), Waste Treatment (RR) (47,700 square feet), Storage and Receiving (V) (52,700 square feet, Watch Shelter (Y-1) (3,070 square feet), X-Ray (Y-2) (1,700 square feet), Pump House (Mill Water) (Y-3) (1,710 square feet), Compressed Gas Storage (Y-4) (1,200 square feet), Pump House (Mill Water) (Y-5) (4,200 square feet), Pump House (Flood Control) (Y-6) (312 square feet), Pump House (Flood Control) (Y-7) (465 square feet), Guard House (Y-13) (660 square feet), Yard Equipment Storage (Y-14) (6,250 square feet), Temporary Boiler Plant (Y-15) (6,000 square feet) and Hazardous Waste Drum Storage Building (Y-16) (450 square feet). Buildings A, Q, Y-1, and Y-15 are inactive, as are additional buildings which include the Foundry (B), Pattern Shop (M), Heating Plant (N), and Garage/Investment Foundry (P).

There are 13 SWMUs of which five are presently inactive (SWMUs 2, 8, 10, 11, and 13). The Waste Sand Landfill Area (SWMU 1) is permitted by the State of Illinois as a Solid Waste Disposal Site and is used only for nonhazardous waste sand from the foundry operations. Discharge from the Wastewater Treatment System (SWMU 7) is regulated under a National Pollutant Discharge Elimination System (NPDES) permit. This system was started in the mid-1970s and is still in operation. Three areas have stored PCBs (SWMUs 11, 12, and 13), which are managed under the Toxic Substances Control Act (TSCA). The actual foundry process consists of four steps, which are: (1) the making of cores, which represent hollow portions of the finished product; (2) molding, which consists of forming sand around a pattern, after which the pattern is removed, thus leaving a void which now represents the external shape of the finished product and setting cores in position; (3) pouring molten iron into the void, thus forming the actual product; and (4) finishing, which removes bumps and rough edges.

2.3 WASTE GENERATING PROCESSES

Wastes are generated and managed at various locations throughout the facility. Facility generation and management of both hazardous and nonhazardous wastes are discussed below. Some

of the waste streams may be hazardous and nonhazardous and are so indicated in the discussion. The waste codes are those assigned by the facility.

The primary waste streams generated at the Caterpillar facility are waste refractory coating (D001, F002, U226, nonhazardous), waste resins (D001, D002, F002, U122, nonhazardous), waste core catalyst (D001, D002, nonhazardous), waste janitorial products (D002, nonhazardous), unused cooling tower chemicals (D001, D002, nonhazardous), waste off-specification chemical (U226), and nonhazardous waste triethylamine scrubber liquor, waste grease, waste oil, waste sand, dust waste, polychlorinated biphenyls (PCB), dewatered sludge, and nonhazardous phenolic wastewater. In the past, waste triethylamine scrubber liquor (D002) and waste grease (D008) were also generated. These wastes are, or were, generated during the manufacture of gray iron castings. Wastes generated at the facility are discussed below and are summarized in Table 2. The discussion, including waste generation rates, will be based on the results of an IEPA inspection report dated December 9 and 16, 1988, and discussions with facility representatives. Wastes have been stored in the Former Hazardous Waste Drum Storage Area (SWMU 2), Indoor Hazardous Waste Drum Storage Area (SWMU 3), Hazardous Waste Drum Storage Area (SWMU 5), and Former Hazardous Waste Drum Storage Marshalling Area (SWMU 8), as listed in Table 2, but records are not available to indicate which specific wastes were stored in which specific units (Caterpillar, 1992a). SWMUs 2, 3, 5, and 8 became active in 1980s, and SWMUs 2 and 8 are presently inactive. The dates SWMUs 2 and 8 became inactive are unknown.

Caterpillar's core manufacturing operation generates several types of waste refractory coatings (D001, F002, U226, nonhazardous). The refractory coating is used to prevent molten iron from sticking to the sand during mold pouring and cooling. The core is dipped into a tank in order to apply the refractory coating. The waste is generated during periodic cleaning of the tank. The process generates an alcohol-based (D001), a solvent (1,1,1-trichloroethane)-based (F002, U226), or a nonhazardous water-based coating, each mixed with clay. The waste was stored in SWMUs 2, 3, 5, and 8. The facility generates an average of 10 drums or less per year (Caterpillar, 1993a). The solvent-based waste is transported off site by Chemical Waste Management (CWM) to Trade Waste Incineration (TWI) in Sauget, Illinois. This waste is treated by incineration. The alcohol-based coating is delivered by CWM to the CWM, Emelle Facility (CWM, EM) in Emelle, Alabama for fuel

TABLE 2

SOLID WASTES

Waste/EPA Waste Code[a]	Source	Solid Waste Management Unit
Waste Refractory Coating/D001, F002, U226, NA	Air dry core, dip and mold spray	2, 3, 5, 8
Waste Resins/D001, D002, F002, U122, NA	Core Room	2, 3, 5, 8
Waste Core Catalyst/D001, D002, NA	Core Room	2, 3, 5, 8
Waste Janitorial Products/D002, NA	Facility Cleaning	2, 3, 5, 8
Unused Cooling Tower Chemicals/ D001, D002, NA	Cooling Towers	2, 3, 5, 8
Waste Off-Specification Chemical/U226	Foundry Process	2, 3, 5, 8
Waste Triethylamine Scrubber Liquor/D002, NA	Core Room	9
Waste Grease/D008, NA	Machinery	2, 3, 5, 8
Waste Oil/NA	Sump Area	4
Waste Sand[b]	Foundry Process	1

Notes:

[a] Not applicable (NA) designates nonhazardous waste.

[b] Caterpillar claims that this waste is nonhazardous (Caterpillar 1992b). IEPA regulates it as a nonhazardous special waste (IEPA 1988a, 1989). Hazardous constituent analyses for this waste were not provided. Hence, no waste designation has been provided.

TABLE 2 (continued)

SOLID WASTES

Waste/EPA Waste Code[a]	Source	Solid Waste Management Unit
Dust Waste[b]	Foundry Process	1, 6
PCBs	Capacitors & Transformers	11, 12, 13
Dewatered Sludge/NA	Wastewater Treatment Plant	7
Phenolic Wastewater/NA	Core equipment cleaning	10

Notes:

[a] Not applicable (NA) designates nonhazardous waste.

[b] Caterpillar claims that this waste is nonhazardous (Caterpillar 1992b). IEPA regulates it as a nonhazardous special waste (IEPA 1988a, 1989). Hazardous constituent analyses for this waste were not provided. Hence, no waste designation has been provided.

blending, while the water-based waste is shipped to CWM, EM for stabilization and landfill (Caterpillar, 1993a).

Caterpillar's core manufacturing operation also generates several types of waste resin (D001, D002, F002, U122, nonhazardous). The resins are used during core manufacturing for binding sand. The waste was stored in SWMUs 2, 3, 5, and 8. The facility generates an average of five drums per month (Caterpillar, 1992b). The waste is transported off site by CWM to CWM, EM for incineration (Caterpillar, 1993a).

Caterpillar's core manufacturing operation generates several types of waste core catalysts (D001, D002, nonhazardous). The core catalysts are used to increase the rate of chemical reaction during core manufacturing (IEPA, 1990a). The waste was stored in SWMUs 2, 3, 5, and 8. The facility generates an average of six drums or less per year (Caterpillar, 1993a). The waste is transported off site by CWM to CWM, EM for fuel blending, stabilization, and landfill (Caterpillar, 1992b).

Caterpillar generates waste janitorial products (D002, nonhazardous) from facility cleaning. The waste was stored in SWMUs 2, 3, 5, and 8. The facility generates an average of one drum or less per year (Caterpillar, 1993a). The waste is transported off site by CWM to CWM, EM for stabilization and landfill (Caterpillar, 1992b).

Caterpillar generated unused cooling tower chemicals (D001, D002, nonhazardous). The facility generated this waste as a one-time generation event during the 1980s. The waste was transported by CWM to CWM, EM for fuel blending, stabilization, and landfill (Caterpillar, 1993a).

Caterpillar utilizes 1,1,1-trichloroethane as a solvent for general cleaning operations (IEPA, 1990a). The spent solvent is the previously discussed waste refractory coating (F002). The waste off-specification chemical (U226) was stored in SWMUs 2, 3, 5, and 8. The facility generates an average of one drum or less per year of this waste. Most of these drums are transported off site by CWM to TWI in Sauget, Illinois for incineration, and the remainder are transported to CWM, EM for solvent recovery (Caterpillar, 1992b).

Caterpillar generates waste triethylamine scrubber liquor (D002, nonhazardous) as a result of an air scrubber operation in the core room. Due to modifications of the operation several years ago, the waste is currently nonhazardous, although in the past it had a hazardous characteristic (D002). This waste is accumulated in the Waste Scrubber Liquor Tank (SWMU 9), an aboveground storage tank located in the basement. This waste is generated at a rate of approximately 3,000 gallons per month. The waste is emptied from the scrubber to the storage tank by gravity feed. When the tank is full, the waste is transferred to a highway tanker truck by hauling it in a small, in-house (approximately 400-gallon) tanker. The wastes are transported off site by the Peoria Disposal Company, Peoria, Illinois to Clean Harbors of Cleveland, Ohio for aqueous organic treatment (Caterpillar, 1993a).

Caterpillar generates nonhazardous waste grease and nonhazardous waste oil as a result of maintenance operations of vehicles and machinery. On one occasion in the past, drums of waste grease (D008) were generated, apparently from leaded bearings contaminating the grease. The waste grease is stored in SWMUs 2, 3, 5, or 8. The oil operation involves the Waste Oil Sump Area (SWMU 4), which is pumped out by the recycler's truck. The facility generates approximately one to three drums per year of the waste grease and 1,000 gallons per month of the waste oil. The waste grease (D008, nonhazardous) was transported by CWM and taken to CWM, EM for stabilization and landfill. The nonhazardous waste oil is transported by Safety-Kleen Corporation to Breslube USA, Inc., East Chicago, Indiana, for reclamation (Caterpillar, 1993a).

Caterpillar generates waste sand from foundry processes. This waste is disposed of on site in Caterpillar's privately owned Waste Sand Landfill Area (SWMU 1). Caterpillar claims that this waste is nonhazardous (Caterpillar, 1992b). IEPA regulates the waste sand as a nonhazardous special waste (IEPA 1988a, 1989). Hazardous constituent analyses for this waste were not provided by Caterpillar. Hence, no waste designation has been provided. The Waste Sand Landfill Area (SWMU 1) has monitoring wells which were installed in December 1991 and January 1992, and according to the facility representative, data from ground water monitoring is submitted quarterly to IEPA and no indication of ground water contamination has been identified (Caterpillar, 1993b). The landfill covers an area of 82 acres and is located south of Building B and north of the Illinois River. The facility's estimate of the annual volume of waste received is 61,000 cubic yards (IEPA, 1991). The total capacity of the landfill is greater than 2 million cubic yards. It is estimated that the landfill will

remain in operation until approximately 1995 or 1997. The waste is transported by Caterpillar's own trucks, scrapers and other hauling equipment. The waste sand is moved into place and compacted using common earthworking machinery.

Caterpillar generates dust waste which is captured in the Facility Baghouse Dust Collectors (SWMU 6) south of Building D. These are air pollution control devices, used for controlling solid particulate emissions to the atmosphere by utilizing an induced draft fan and collecting the dust in a series of special-type cloth bags. The dust particulates are automatically removed from the bags and gravity fed onto a conveyor. The conveyor then transports the waste dust to a storage hopper where it is mixed with sand and water. The waste is generated at the rate of approximately 10 cubic yards per month. The waste is then taken to the Waste Sand Landfill Area (SWMU 1). Caterpillar claims that this waste is nonhazardous (Caterpillar, 1992b). IEPA regulates the dust waste as a nonhazardous special waste (IEPA, 1988b, 1989). Hazardous constituent analyses for this waste were not provided by Caterpillar. Hence, no waste designation has been provided. The Waste Sand Landfill Area has monitoring wells which were installed in 1991 and 1992.

Caterpillar generates significant amounts of PCBs periodically when old equipment containing PCB capacitors and transformers breaks down or becomes unserviceable. Caterpillar is no longer purchasing new components which utilize PCBs. The drummed wastes which may be contaminated with PCBs were initially stored in the Former PCB Storage Area (SWMU 11) and subsequently stored in the PCB Storage Area (SWMU 12) and then shipped for incineration to various incinerators (IEPA, 1986). Contaminated debris from a capacitor fire cleanup in 1984 were stored in the Temporary PCB Storage Area (SWMU 13).

Caterpillar's Wastewater Treatment System (SWMU 7) generates dewatered sludge (nonhazardous) as a residue. The sludge is collected from the acid-alkali-oil (AAO) treatment systems, sanitary treatment system, and the dust collector wastewater (DCWW) systems. Dewatered sludge is estimated to be 40 percent solid and is transferred from the drying units to a truck loadout area with belt conveyors, all of which are a part of SWMU 7. It is estimated that 60 to 80 cubic yards per day of dry sludge is disposed of at the Peoria City/County Landfill (Caterpillar, 1993a).

Between the mid-1970s and the early 1980s, Caterpillar generated a nonhazardous phenolic wastewater. This wastewater was generated from the core manufacturing process in Building B. Water was used to clean the core manufacturing machines and the resultant wastewater contained low levels of phenols from core resins used during the production (Caterpillar, 1992e). According to Illinois Disposal Permit No. 781475, this wastewater was nonhazardous (Caterpillar, 1992d). The wastewater was directed to the Phenolic Wastewater Storage Tank (SWMU 10) via a piping system. The phenolic wastewater was then discharged to the facility's on-site sanitary waste treatment plant for biological treatment along with the facility's sanitary waste (Caterpillar, 1992e). According to a facility representative, an off-site disposal permit was maintained by Caterpillar in the event that the storage/treatment capacity became insufficient. It is not known if Caterpillar ever utilized this disposal permit.

2.4 HISTORY OF DOCUMENTED RELEASES

Between the mid-1970s and early 1980s, Caterpillar generated a nonhazardous phenolic wastewater from the cleaning of the core manufacturing machines (Caterpillar, 1992e). This wastewater was stored in the Phenolic Wastewater Storage Tank (SWMU 10) prior to on-site biological treatment. According to a facility representative, overflows occurred at this tank resulting in the phenolic wastewater being released to uncovered soil beneath and around SWMU 10. The facility was unable to provide any information regarding dates, amounts, or remedial activities associated with these releases.

On March 22, 1982, there was a small gasoline leak from a damaged discharge line on a small tank located on a Building D slab. The leak was reported to National Response Center (NRC) the same day. There was no release to any environmental media (Caterpillar, 1992a).

On June 11, 1982, there was a mercury (D009) spill inside Building B (molding) which occurred from a broken counterweight. The spill was reported to NRC on June 23, 1982. The spill occurred in a mold line shakeout area. This particular shakeout area used counterweights filled with mercury, which were used to produce a vibratory action needed to shake sand off castings. The counterweight was damaged and released approximately 12 pounds of mercury. The mercury spill was on a concrete floor and was cleaned up so that there was no release to the environment. The

concrete floor is 10 inches thick. The mercury was given to a Caterpillar laboratory for their use. There is no documentation of cleanup approval from IEPA (Caterpillar, 1992a).

On December 1, 1982 there was a gasoline pipeline leak, the Aboveground Storage Tank (AST) Split-Pipeline Leak Area (AOC 1). There was a split in a pipe that fed gasoline from an AST into pumps for vehicles. This area is located immediately south of Building B. The line was shut off. The leak was reported to NRC on December 1, 1982. According to a facility representative, sampling and any necessary removal and proper disposal of soil are scheduled for the near future (Caterpillar, 1992a).

On February 4, 1983, there was a release of a caustic cleaning solution. A facility representative stated that the only record of this incident is a release report made by telephone to NRC in 1983. The facility representative also commented that the release report does not list the location of the spill, although it indicates the material was collected for proper disposal (Caterpillar, 1992a). There was no documentation of release to the environment.

A fire in a capacitor vault, in Building B, on June 20, 1984 caused the release of PCB-contaminated water onto the ground outside the south end of the building and into a catch basin called Y-6 (see Figure 2). This spill involved approximately 100 gallons of PCB-contaminated water from a number of small capacitors, which resulted in an extensive cleanup which is now complete. IEPA submitted a letter to Caterpillar, approving the cleanup of the PCB spill (IEPA, 1985).

On November 6, 1990, there was a sulfuric acid leak from an acid feed line for the wastewater treatment plant, outside on the west side of Building RR, referred to as the Sulfuric Acid Leak Area (AOC 2), which was reported to NRC on the same day. The leak had contaminated soil in the immediate area. The contaminated soil was removed by Caterpillar personnel and shipped out (Caterpillar, 1992a). There is no documentation of any soil sampling subsequent to remediation. No information was available on the transporter used or the ultimate disposition of the contaminated soil.

On December 19, 1991, a truck (not Caterpillar's) had an accident at the Caterpillar facility. As a result of the accident, a diesel fuel saddle tank was ripped away from the truck causing a spill in the Diesel Fuel Truck Saddle Tank Spill Area (AOC 4), which contaminated the soil near the

southwest corner of Building D. The owner of the truck contracted a spill response company to clean up the area. Some contaminated soil was removed and disposed of by the spill response company. There is no documentation of sampling or where the contaminated soil was shipped (Caterpillar, 1992a).

In mid-January 1992, Caterpillar detected a release in the Abandoned Aboveground Storage Tank Leak Area (AOC 3). The incident was reported to the Illinois Emergency Services and Disaster Agency (IESDA). The tank contained gasoline, which was originally used for fuel in vehicles. The aboveground pump station which would have worked in conjunction with this tank has been removed. Based on tests which were taken at the site, some contamination was detected. There is no documentation as to the type of tests which were taken or when they were taken. It is also understood that Caterpillar intends to perform more testing and to remediate as required. It is not known what type of testing will be performed. IESDA has notified IEPA about the release (Caterpillar, 1992c). No further information was given to RAI regarding this release.

2.5 REGULATORY HISTORY

According to an IEPA inspection report, Caterpillar submitted a Notification of Hazardous Waste Activity to EPA on August 18, 1980 (IEPA, 1988b). A copy of Caterpillar's notification could not be obtained by RAI. The facility submitted a RCRA Part A permit application on November 17, 1980 (Caterpillar, 1980). The application listed the following wastes: D001, D002, D006, D008, D013, D017, F001, U009, U121, U122, U133, U154, U188, U226, U228, and U242. The process design capacity is listed as a 33,000-gallon drum storage area (S01), 500-gallon storage tank (S02), 500 liters-per-day treatment (T04), and 20 gallons-per-day tank treatment (T01). The total estimated quantity of waste was 1,293,000 pounds per year. The above does not include PCB waste, which is managed separately and shipped to various incineration facilities for disposal. According to a facility representative, the S02 designation referred to the Phenolic Wastewater Storage Tank (SWMU 10) and although the capacity for SWMU 10 could not be determined, it was greater than 500 gallons. On December 21, 1984, Caterpillar submitted a revision to the Part A permit application to change its waste codes (Caterpillar, 1984). This letter stated that the Caterpillar, Mapleton plant did not have any hazardous waste storage tanks in use. They had filed incorrectly. The application listed the following wastes: D001, D002, D008, and U226. The process design

capacity is listed as a 33,000-gallon drum storage area (S01). The total estimated quantity of waste is 286,000 pounds per year. On May 31, 1989, Caterpillar submitted a revision to the Part A permit application to change its waste codes (Caterpillar, 1989). The application listed the following wastes: D001, D002, D003, F002, U122, and U226. The process design capacity is listed as a 55,000-gallon drum storage area (S01). The total estimated quantity of waste is 28,000 pounds per year.

Caterpillar is currently in the process of closing the following SWMUs: Former Hazardous Waste Drum Storage Area (SWMU 2), Indoor Hazardous Waste Drum Storage Area (SWMU 3), Hazardous Waste Drum Storage Area (SWMU 5) and Former Hazardous Waste Drum Storage Marshalling Area (SWMU 8) (Caterpillar, 1987). These four SWMUs will go through RCRA closure following approval of closure plans, which Caterpillar has submitted to IEPA (Caterpillar, 1993b).

Caterpillar is classified as a large-quantity generator and storage facility (IEPA, 1988a). The Waste Sand Landfill Area (SWMU 1) is permitted by the State of Illinois as a solid waste disposal site for nonhazardous special waste (LPC No. 143 805 004) (IEPA, 1988a, 1991). Caterpillar claims that SWMU 1 manages nonhazardous waste (Caterpillar, 1992b). IEPA documents indicate that the waste in SWMU 1 consists of nonhazardous special waste sand and dust generated in the Caterpillar foundry (IEPA, 1988a, 1989). Since this unit manages nonhazardous special waste, IEPA documents also refer to this unit as a special waste landfill (IEPA, 1988a, 1989). The IEPA special waste permit and supplemental permit, required for disposal of the waste in SWMU 1, are No. 1975-2-OP and 1991-300-SP.

The Wastewater Treatment System (SWMU 7) discharges treated wastewater from the foundry process and sanitary sources to the Illinois River from three outfalls (001A, 001B, 001C). The discharges from SWMU 7, sanitary, and noncontact cooling water sources are regulated under NPDES Permit No. IL0001830, effective September 22, 1990 (IEPA, 1990b). Caterpillar releases noncontact cooling water to the Illinois River without treatment (Caterpillar, 1991). The primary parameters to be monitored and limited for the sanitary and process outfall (outfall 001A) are pH, BOD_5, total suspended solids, chromium (total), chromium (hexavalent), iron, zinc, phenol, oil and grease, fecal coliform, and chlorine residual. The primary parameters to be monitored for the noncontact cooling water outfall (001B) are temperature, pH, and oil and grease. The primary parameters to be monitored and limited for the dust collection scrubber wastewater outfall (outfall

001C) are pH, total suspended solids, oil and grease, copper, lead, zinc, chlorine residual, and phenol. In addition, Caterpillar will continually evaluate the potential for discharge of other pollutants not specifically limited in the permit (Caterpillar, 1990).

A RCRA compliance inspection was conducted by IEPA in September 1987. Violations related to an inadequate contingency plan were noted (IEPA, 1987). Caterpillar responded to these violations; however, no further documentation was available (Caterpillar, 1987). Other inspections were conducted in December 1988, July 1989 and May 1990. Inspectors noted violations related to hazardous waste storage tank violations (referring to SWMU 9) (IEPA, 1988b), violation of special waste handling (IEPA, 1989) and failure to file a closure plan (IEPA, 1990a). No documentation regarding resolution of these violations was available to RAI.

The facility has operating air permits for the following areas: Boiler 1 (coal), Boiler 2-3 (coal), Boiler 4-5 (coal), Boiler 1 (oil), Boiler 2-3 (gas), Boiler 5 (oil), Kewanee Boilers, D-Core, D-Mold Line 1 and 2, D-Mold Line 4, D-Melting, Phase II Melting, D-Finishing, 3500 Area, 3600 Area, D-Camshaft/Manufacturing Development, Pattern Shop, Organic Liquid, Bulk Chemical, and Open Burning (Caterpillar, 1993a). The facility has no history of odor complaints or documented air permit compliance problems.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Caterpillar facility.

2.6.1 Climate

The climate in Peoria County is continental, with wide variations in temperature between summer and winter. The average daily temperature is 50.4°F. The lowest average daily temperature is 13.3°F in January. The highest average daily temperature is 85.5°F in July (NOAA, 1990).

The average annual precipitation for Peoria is 34.89 inches (NOAA, 1990). The mean annual lake evaporation for the area is about 32 inches (USDC, 1968). The 1-year, 24-hour maximum

rainfall is 5.06 inches (NOAA, 1990). Average annual snowfall is 24.7 inches. Precipitation is somewhat evenly distributed throughout the year, with slightly more falling in spring and summer (NOAA, 1990).

The prevailing wind is from the south, except during the winter months, when winds from the west-northwest may be more frequent. Average annual wind speed is 10.0 miles per hour (mph). Average wind speed is highest in March, at 12.1 miles per hour. The average relative humidity is about 71 percent. Humidity is higher at night, and the average at dawn is about 83 percent (NOAA, 1990).

2.6.2 Flood Plain and Surface Water

The portion of the Caterpillar facility property south of the main plant buildings lies within the 500-year flood plain but outside the 100-year flood plain. The remainder of the property is outside the 500-year flood plain (FEMA, 1983). The nearest surface water body is the Illinois River which is located next to the southern property line and is approximately 700 feet from the nearest Caterpillar building. The Illinois River is used for recreational, agricultural, industrial and municipal water supply purposes. This surface water body discharges to the Mississippi River.

Surface water drainage at the facility is to the south toward the Illinois River. Storm water discharges (drains) rapidly toward the Illinois River. Two major surface water bodies are in the area. The Little Lamarsh Creek runs north and south basically through the center of the Caterpillar property, between Buildings B and D and drains into the Illinois River. Little Lamarsh Creek is used for drainage purposes. The other main surface water body is Pond Lily Lake, located approximately 1 mile southeast of Caterpillar's Building B and is just north of the Illinois River. Wetlands are abundant in the area. The entire Caterpillar site was originally wetlands before it was altered for the current land use (USDA, 1992). There are no drinking water wells on site. The nearest ground water wells are in the Village of Mapleton, approximately 0.5 mile north (upgradient) from Caterpillar. According to the facility representative, additional wells may be on industrial property east of the facility (Caterpillar, 1993a).

2.6.3 Geology and Soils

The facility is underlain by Orthents-Urban Land according to the Peoria County Soil and Water Conservation District (PCSWCD). Accordingly, this unit is defined as disturbed and/or developed lands, consisting mainly of fill, and often where underlying or original soils can no longer be distinguished. The soil in the vicinity of the plant is sandy loam to a depth of 13 feet. Below this is a layer of compacted blue clay from 2 to 8 feet thick. To the east of the facility are original deposits classified as Dickinson soils. The topsoil is characterized by very dark brown, very dark gray and dark brown friable fine sandy loam. The subsoil is characterized by very dark grayish brown, dark brown and yellowish brown friable fine sandy loam in the upper part and yellowish brown loamy sand in the lower part. The underlying material is principally brown sand to a depth of 60 inches (PCSWCD, 1992).

No site-specific geologic information was available, but in the vicinity of the Caterpillar facility, the surficial geology consists of Quaternary till. This is primarily sandy and slightly clayey silty till divided into two beds, often with intercalated lenses of sand and gravel. The entire land surface of Peoria County consists of unconsolidated glacial deposits, or drift, of Pleistocene (Wisconsinan) age, as well as alluvium derived from subsequent erosion of glacial materials by water (Bergstrom, 1956).

The uppermost bedrock beneath the glacial drift at the facility is Silurian in age. The rocks consist of limestones and dolomites with interbedded calcareous siltstones, and the total thickness may be greater than 250 feet. Beneath the Silurian rocks are dark gray to pale greenish-gray Ordovician shales, which are only identified in well records (Bergstrom, 1956).

2.6.4 Ground Water

In the vicinity of the facility, water may be supplied from Pleistocene sand and gravel deposits or from upper bedrock limestone of the Keokuk and Burlington Formations, which are Mississippian in age. Close proximity to the Illinois River generally produces sand and gravel aquifers which are highly permeable and excellent sources of water. However, according to the facility representative, the ground water under the facility is of poor quality and quantity, and

Caterpillar uses water from the Illinois River (Caterpillar, 1993a). Along the Illinois River in the Peoria region, the Sankoty sand and younger glacial outwash deposits are among the most prolific aquifers in the state (Bergstrom, 1956). The Sankoty sand, which forms a thick fill in and along the Illinois River valley, is the principal aquifer for municipal and industrial supplies. The thickness of this sand varies from 50 feet to 150 feet along the Illinois River, and may reach a maximum of up to 300 feet along the uplands to the west. Ground water flow at the facility is to the south. The deep wells are developed in dolomites of the Galena-Platteville Formations which are Ordovician in age (Bergstrom, 1956).

2.7 RECEPTORS

The Caterpillar facility occupies 608 acres in an industrial area in Mapleton, Illinois. Mapleton has a population of about 220. Caterpillar employs about 800 people.

The Caterpillar facility is bordered on the north by U.S. Route 24/Illinois Route 9 and the Village of Mapleton, on the west by open land and farmland, on the south by the Illinois River, a barge terminal and warehouse, and on the east by two chemical plants. The nearest school, Mapleton School, is located about 0.5 mile north of the facility. Facility access is controlled by fencing, security guards and video-monitoring (Caterpillar, 1992a). The nearest surface water body is the Illinois River, located on the south property line of the facility and is used for recreational, industrial, agricultural, and municipal water supply purposes. Other surface water bodies in the area include the Little Lamarsh Creek and Pond Lily Lake.

The Little Lamarsh Creek runs north and south, through the center of the Caterpillar property, between Buildings B and D and drains into the Illinois River. Pond Lily Lake is located approximately 1 mile southeast of Caterpillar's Building B and is on the north side of the Illinois River. Wetlands are abundant in the area. The entire Caterpillar site was originally wetlands and was altered for the current land use (USDA, 1992). There are no drinking water wells at the facility. The nearest ground water wells are in the Village of Mapleton, approximately 0.5 mile north from Caterpillar, although additional wells may be located on industrial property to the east of the facility (Caterpillar, 1993a).

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 13 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and RAI observations.

SWMU 1 **Waste Sand Landfill Area**

Unit Description: The Waste Sand Landfill Area is an 82-acre landfill located in the southern section of the Caterpillar plant property. The landfill manages foundry sand from the Mapleton plant, consisting of core sand and waste foundry sand. Waste sand and broken cores (sand) are delivered to the landfill by trucks, scrapers and other hauling equipment. The waste materials are moved into place and compacted using common earthworking equipment. This landfill area also accepts dust waste from the Facility Baghouse Dust Collectors (SWMU 6). The total capacity of the landfill is greater than 2 million cubic yards. The landfill covers an area of approximately 2,300 feet by 1,600 feet (see Photograph No. 1)

Date of Startup: The unit began operations in the mid-1970s.

Date of Closure: The unit is currently operational and is permitted by the State of Illinois as a Solid Waste Disposal Site. The estimated year for final closure is 1995 to 1997.

Wastes Managed: The unit manages waste sand, broken cores (sand), and dust waste. Caterpillar claims that this waste is nonhazardous (Caterpillar, 1992b). IEPA regulates this waste as nonhazardous special waste (IEPA, 1988b, 1989). Hazardous constituent analyses for this waste were not provided by Caterpillar. Hence, no waste designation has been

provided. The Waste Sand Landfill Area has monitoring wells which were installed in 1991 and 1992 (Caterpillar, 1993a).

Release Controls: The site was originally prepared by constructing levees on all sides and stockpiling the virgin soil for final cover. This unit has no liner. Monitoring wells are located at this unit.

History of Documented Releases: No releases from this unit have been documented. Data from ground water monitoring are submitted every quarter to IEPA and no indication of ground water contamination has been identified.

Observations: The unit appears to be clean and well kept. No visual sign of releases was observed.

SWMU 2 **Former Hazardous Waste Drum Storage Area**

Unit Description: The Former Hazardous Waste Drum Storage Area is surrounded by an 8-foot fence and is located south of Building Q. The area consists of an all gravel cover and occupies a space of approximately 80 feet by 80 feet. This area is no longer active (see Photograph No. 2).

Date of Startup: It is estimated to be during the 1980s.

Date of Closure: The unit is inactive; it is unknown when it became inactive. It is intended to go through RCRA closure following approval of the closure plan, which has been submitted to IEPA.

Wastes Managed: Hazardous wastes have been stored in this area, but according to a facility representative, no records are available to indicate which specific wastes were stored. The unit could have managed waste

	refractory coating (D001, F002, U226, nonhazardous), waste resins (D001, D002, F002, U122, nonhazardous), waste core catalyst (D001, D002, nonhazardous), waste janitorial products (D002, nonhazardous), unused cooling tower chemicals (D001, D002, nonhazardous), waste off-specification chemical (U226) and waste grease (D008, nonhazardous).
Release Controls:	No release controls were observed. Drums were originally stored on a gravel covered area.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	There were no drums left in this area. No visual signs of release were observed.
SWMU 3	**Indoor Hazardous Waste Drum Storage Area**
Unit Description:	The Indoor Hazardous Waste Drum Storage Area is located inside Building V. It consists of a concrete floor enclosed by two adjacent walls and a single strand chain-type fence. The area of this unit is approximate 30 feet by 60 feet. (See Photograph No. 3).
Date of Startup:	It is estimated to be during the 1980s.
Date of Closure:	The unit is active. It is intended to go through RCRA closure following approval of the closure plan, which has been submitted to IEPA.
Wastes Managed:	Hazardous wastes have been stored in this area, but no records are available to indicate which specific wastes were stored (Caterpillar, 1992a). The unit could have managed waste refractory

	coating (D001, F002, U226, nonhazardous), waste resins (D001, D002, F002, U122, nonhazardous), waste core catalyst (D001, D002, nonhazardous), waste janitorial products (D002, nonhazardous), unused cooling tower chemicals (D001, D002, nonhazardous), waste off-specification chemical (U226), and waste grease (D008, nonhazardous).
Release Controls:	The unit is inside, on a concrete floor.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	At the time of inspection, the unit contained approximately 70 drums of waste, all of which were stored on wooden skids. A brief examination of the area showed the drums containing waste grease (D008, nonhazardous), waste resin solutions (D001, D002, F002, U122, nonhazardous), waste janitorial products (D002, nonhazardous), and unused commercial pesticides. No visual signs of releases were observed.
SWMU 4	**Waste Oil Sump Area**
Unit Description:	The Waste Oil Sump Area is located in Building V. It is a concrete pit where nonhazardous waste oil is obtained from changing oil in various vehicles. The opening appears to be 8 feet by 8 feet by 3 feet deep. The waste oil is pumped out of the sump into the recycler's truck and is transported to various waste oil recyclers. Waste oil (nonhazardous) is also generated from various types of machinery (see Photograph No. 4).
Date of Startup:	It is estimated to be the early 1980s.

Date of Closure:	The unit is active.
Wastes Managed:	The unit manages nonhazardous waste oil.
Release Controls:	The unit is indoors and constructed of concrete.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	No visual signs of release were observed in the area of the sump.
SWMU 5	**Hazardous Waste Drum Storage Area**
Unit Description:	The Hazardous Waste Drum Storage Area is in a separate enclosure located north of Building V. The enclosure is called Y-16. The enclosure consists of three walls and a metal roof with a cyclone-type fence on the fourth side. The enclosure occupies an area approximately 12 feet by 30 feet, on concrete. The concrete floor is encompassed by a curb about 4 inches high (see Photograph No. 5).
Date of Startup:	It is estimated to be during the 1980s.
Date of Closure:	The unit is active. It is intended to go through RCRA closure following approval of the closure plan, which has been submitted to IEPA.
Wastes Managed:	Hazardous wastes have been stored in this area, but no records are available to indicate which specific wastes were stored (Caterpillar, 1992a). The unit could have managed waste refractory coating (D001, F002, U226, nonhazardous), waste resins (D001, D002, F002, U122, nonhazardous), waste core catalyst (D001, D002, nonhazardous), waste janitorial products (D002, nonhazardous),

	unused cooling tower chemicals (D001, D002, nonhazardous), waste off-specification chemical (U226), and waste grease (D008, nonhazardous).
Release Controls:	The unit is on a concrete slab with a 4-inch-high curb encompassing its perimeter.
History of Documented Releases:	No releases from the unit have been documented.
Observations:	The unit contained approximately 15 drums at the time of the VSI. No visual signs of release were observed.
SWMU 6	**Facility Baghouse Dust Collectors**
Unit Description:	The Facility Baghouse Dust Collectors are an air pollution control system, used to control solid waste particulate emissions to the atmosphere in the facility's process areas. The baghouses are constructed of 10-gauge mild steel and the bags are made of polyester felt. The baghouses are located in three areas: Melting (30 units), Finishing (13 units), and 3500 Cell Area (5 units). The total capacity of the baghouses by area are Melting, 460,000 cubic feet per minute (cfm); Finishing, 485,000 cfm; and 3500 Cell Area, 125,000 cfm. The waste particulates captured in the collectors are discharged downward to hoppers at the bottom of each collector. The waste particulates are then discharged onto a conveyor system, which transports the waste particulates to a final storage hopper. The waste particulate collected in the hopper is then mixed with waste sand and water and taken to SWMU 1 (see Photograph No. 6).
Date of Startup:	It is estimated to be 1978.

Date of Closure:	This unit is active.
Wastes Managed:	This unit manages dust waste from the foundry process. Caterpillar claims that this waste is nonhazardous (Caterpillar, 1992b). IEPA regulates the dust waste as a nonhazardous special waste (IEPA, 1988b, 1989). Hazardous constituent analyses for this waste was not provided by Caterpillar. Hence, no waste designation is given.
Release Controls:	There were no release controls observed.
History of Documented Releases:	No releases from the unit have been documented.
Observations:	The dust collectors appeared sound and well kept. No visual signs of releases were observed.

SWMU 7 **Wastewater Treatment System**

Unit Description:	The Wastewater Treatment System is used to clean up water from the foundry process and sanitary wastewater before it is discharged into the Illinois River. Caterpillar's combined industrial and sanitary wastewater treatment system has a maximum design capacity of 5 million gallons per day. It is located inside Building RR. Caterpillar's wastewater treatment facility is extensive and constructed of a variety of materials. The most common materials are concrete and steel. The facility generated oil skimmings and sludge. There are 6,000 square feet of floor area where the sludge is deposited during cleanout of the treatment process. The sludge consists of solids which settle out during the treatment process. The sludge consists mainly of waste sand and dust (see Photographs No. 7, 8, and 9).
Date of Startup:	The current system was started in the early 1990s.

Date of Closure:	The unit is active.
Wastes Managed:	This unit manages dewatered sludge (nonhazardous).
Release Controls:	The system is partially inside a building with a concrete floor. There were no other release controls observed.
History of Documented Releases:	No releases from the unit have been documented.
Observations:	The unit appeared sound and well kept. No visual signs of releases were observed.

SWMU 8 **Former Hazardous Waste Drum Storage Marshalling Area**

Unit Description:	The Former Hazardous Waste Drum Storage Marshalling Area is located inside Building B, at the southwest corner alongside the west wall. The unit occupies an area of approximately 8 feet by 40 feet of concrete floor. This area is no longer in use. It was originally used as a temporary drum drop-off storage area before the drums were moved again to a more permanent storage area. Storage for one to two days is considered temporary storage by the Caterpillar personnel (see Photograph No. 10).
Date of Startup:	It is estimated to be during the 1980s.
Date of Closure:	The unit is inactive; it is unknown when it became inactive. It is intended to go through RCRA closure following approval of the closure plan, which has been submitted to IEPA.
Wastes Managed:	The unit has stored waste off-specification chemical (U226) and waste resins (D001, D002, F002, U122, nonhazardous) (IEPA, 1985).

	Other hazardous waste may have been stored in this area, but no records are available to indicate which specific wastes were stored (Caterpillar, 1992a). Other wastes may have included waste refractory coating (D001, F002, U226, nonhazardous), waste core catalyst (D001, D002, nonhazardous), waste janitorial products (D002, nonhazardous), unused cooling tower chemical (D001, D002, nonhazardous), and waste grease (D008, nonhazardous).
Release Controls:	The unit is inside a building on a concrete floor.
History of Documented Releases:	No releases from the unit have been documented.
Observations:	There were no drums of waste in this area. No visual signs of release were observed.
SWMU 9	**Waste Scrubber Liquor Tank**
Unit Description:	The Waste Scrubber Liquor Tank discharges waste triethylamine scrubber liquor through pipes, by gravity, from scrubbers located on the second floor to aboveground storage tanks located on the basement level. The tanks are indoors and on a concrete floor. The scrubber liquor is transferred from the storage tanks to a highway tanker truck by hauling it in a small, in-house (approximately 400-gallon) tanker. The waste liquor is then transported to Clean Harbors of Cleveland, Ohio for aqueous organic treatment (Caterpillar, 1992b).
Date of Startup:	It is estimated to be during the late 1970s or early 1980s.
Date of Closure:	The unit is active.

Wastes Managed:	This unit manages waste triethylamine scrubber liquor (D002, nonhazardous).
Release Controls:	No release controls were observed for this unit.
History of Documented Releases:	No releases from the unit have been documented.
Observations:	During the VSI, two triethylamine product USTs were represented as this unit. Information gained after the VSI determined the two USTs were misidentified (Caterpillar, 1992b). The room where this unit is located and the associated ASTs were not observed during the VSI.
SWMU 10	**Phenolic Wastewater Storage Tank**
Unit Description:	The Phenolic Wastewater Storage Tank was located outdoors, along the west wall of Building B. The unit stored nonhazardous phenolic wastewater that was generated during the core manufacturing process. According to a facility representative, this aboveground tank is believed to have had a capacity greater than 500 gallons and was constructed of steel. There was no concrete pad associated with this unit.
Date of Startup:	The unit began operations in the mid-1970s.
Date of Closure:	The unit was removed from the facility in the early 1980s.
Wastes Managed:	The unit managed phenolic wastewater. According to Illinois Disposal Permit No. 781475 issued to the facility, the phenolic wastewater was nonhazardous (Caterpillar, 1992d).
Release Controls:	The unit had no release controls.

History of Documented Release:	According to a facility representative, some overflows occurred at this unit. Nonhazardous phenolic wastewater was released to the soil beneath and around the unit. Information regarding dates, amounts, and remedial actions associated with these releases was not available.
Observations:	The unit no longer exists at the facility. This SWMU was not identified until after the VSI; therefore, its location was not observed.
SWMU 11	**Former PCB Storage Area**
Unit Description:	The Former PCB Storage Area was located indoors, on the first floor of Building B, near the shipping area. According to the facility representative, the unit stored PCB waste exclusively. The area was approximately 15 feet by 20 feet and enclosed by fences and a concrete block wall. The unit was a curbed area on a concrete floor. PCB capacitors and other PCB items, such as used protective clothing, were stored in this area prior to shipment.
Date of Startup:	The unit began operations in approximately the early 1970s.
Date of Closure:	The unit became inactive during the mid-1980s. All contents of the unit were removed to the new PCB Storage Area (SWMU 12) and/or removed for disposal.
Wastes Managed:	The unit managed PCBs. All items were shipped off site for disposal by incineration or landfill.
Release Controls:	The unit was curbed and located on a concrete floor.
History of Documented Release:	No releases from this unit have been documented.

Observations:	This SWMU was not identified until after the VSI; therefore, its location was not observed.
SWMU 12	**PCB Storage Area**
Unit Description:	The PCB Storage Area is located indoors, on the first floor, in the west end of the Building N transformer room. The unit is approximately 30 feet by 30 feet and located in an electrical transformer room with concrete block walls and a concrete floor. The unit stores PCB capacitors and other items, such as used protective clothing, on plastic sheeting, prior to off-site disposal. All PCBs are packed into drums or crates. According to the facility representative, only small amounts of PCB equipment remain in the plant, so there is minimal use of this area. This unit replaced the Former PCB Storage Area (SWMU 11).
Date of Startup:	The unit began operations in the mid-1980s.
Date of Closure:	The unit is active.
Wastes Managed:	The unit manages PCBs prior to shipment off site for incineration. Intact capacitors may be stored in the area until packed. All PCB items are packed into drums or crates prior to disposal.
Release Controls:	The unit has plastic sheeting protecting a concrete floor. The area is inspected monthly by facility personnel.
History of Documented Release:	According to the facility representative, PCB fluid from a capacitor was cleaned from the floor of this unit. Post-cleanup sampling was conducted by the facility and according to the facility representative, the area was clean.

Observations:	This SWMU was not identified until after the VSI; therefore, its location was not observed.
SWMU 13	**Temporary PCB Storage Area**
Unit Description:	The Temporary PCB Storage Area was located indoors in Building D. During cleanup from a fire involving PCB capacitors, a temporary drum storage area was constructed. Wooded curbs and a security barrier surrounded an area of concrete floor that was covered with multiple layers of plastic and sealed with tape. The unit stored drums of PCBs and debris from the clean up of the fire. IEPA approved the cleanup of the PCB spill (IEPA, 1985).
Date of Startup:	The unit began operations in the summer of 1984.
Date of Closure:	The unit ceased operating in late 1984 or early 1985. All plastic and tape were removed and shipped off site for disposal. IEPA approved the cleanup of the PCB spill.
Wastes Managed:	The unit managed PCBs, such as capacitors, used absorbent, protective clothing, and fire debris. All material was shipped off site for disposal by incineration.
Release Controls:	The unit had layers of plastic sheeting, sealed with tape, covering wooden curbs and a concrete floor.
History of Documented Release:	No releases have been documented for this unit.
Observations:	This SWMU was not identified until after the VSI; therefore, its location was not observed.

4.0 AREAS OF CONCERN

RAI identified four AOCs during the PA/VSI. These are discussed below and their locations are shown on Figure 3.

AOC 1 **Aboveground Storage Tank Split-Pipeline Leak Area**

On December 1, 1982, there was a gasoline pipeline leak. This area is located immediately south of Building B. The leak occurred from a split in a pipe that fed gasoline from an AST into pumps for vehicles. The line was shut off. The exact volume of the spill is not known. The leak was reported to NRC on December 1, 1982. According to a facility representative, sampling and any necessary removal and proper disposal of soil is scheduled for the near future (Caterpillar, 1992a). Until remediation is completed and approved by IEPA, the spill is considered an AOC.

AOC 2 **Sulfuric Acid Leak Area**

On November 6, 1990, there was a sulfuric acid leak from an acid feed line for the wastewater treatment plant, outdoors of Building RR. The leak was reported to NRC on the November 7, 1990. The leak had contaminated soil in the immediate area. The maximum amount of sulfuric acid released was 2,420 pounds. Twenty-two 85-gallon drums of contaminated material were removed by Caterpillar personnel and shipped out (Caterpillar, 1993a). There is no documentation of (1) where the soil was removed, (2) sampling results to confirm that no contamination exists, or (3) IEPA approval; therefore this spill area is considered an AOC (see Photograph No. 11).

AOC 3

Abandoned Aboveground Storage Tank Leak Area

In mid-January 1992, Caterpillar detected a gasoline leak in what appeared to be an abandoned AST. This incident occurred just before RAI conducted the VSI and minimal information is available regarding the leak. Based on some tests performed on site, some contamination was detected. The nature of the tests is not known. It is understood that Caterpillar intends to perform further testing and to remediate as required. The incident was reported to the Illinois Emergency Service and Disaster Agency (IESDA) who then notified IEPA about the release. No further information was given to RAI regarding this release (Caterpillar, 1992c).

AOC 4

Diesel Fuel Truck Saddle Tank Spill Area

On December 19, 1991, a truck (not belonging to Caterpillar) had an accident at the Caterpillar facility. As a result of the accident, a diesel fuel saddle tank was ripped away from the truck causing a diesel fuel spill which contaminated the soil in that area. The owner of the truck contracted a spill response company to clean up the area. Some contaminated soil was removed and disposed of by the spill response company. There is no documentation of sampling or where the contaminated soil was shipped (Caterpillar, 1992a).

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5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 13 SWMUs and four AOCs at the facility. Background information on the facility's location, operations, waste generating processes, history of documented releases, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is discussed in Section 3.0. AOCs are discussed in Section 4.0. Following are RAI's conclusions and recommendations for each SWMU and AOC. Table 3 identifies the SWMUs and AOCs at the Caterpillar facility and recommended further actions.

SWMU 1 **Waste Sand Landfill Area**

Conclusions: The unit is currently operational and is permitted by the State of Illinois as a Solid Waste Disposal Site. The unit manages waste sand and dust. Caterpillar claims that this waste is nonhazardous (Caterpillar, 1992b). IEPA claims that the waste is a nonhazardous special waste (IEPA, 1988b, 1989). Hazardous constituent analyses for this waste and a copy of the current special waste disposal permit application were not provided by Caterpillar. This unit has monitoring wells which were installed in 1991 and 1992 (Caterpillar, 1993a). This unit has no liner. According to the facility representative, monitoring well data are submitted quarterly to IEPA and no ground water contamination has been identified (Caterpillar, 1993b). The potential for release of hazardous constituents to ground water, surface water, air, or on-site soils from this unit is unknown because the hazardous constituent content in the waste disposed in this unit is unknown.

Recommendations: RAI recommends soil sampling to determine if hazardous constituent contamination does exist at this unit. If contamination is found, ground water monitoring should continue and the contamination

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TABLE 3

SWMU AND AOC SUMMARY

SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
1. Waste Sand Landfill Area	Mid-1970s to present	None	Perform soil sampling to determine if hazardous constituent contamination exists. If so, remediation of the contamination and continued ground water monitoring is recommended. Perform hazardous constituent analyses on waste sand and dust.
2. Former Hazardous Waste Drum Storage Area	1980s to unknown	None	Complete RCRA closure as planned.
3. Indoor Hazardous Waste Drum Storage Area	1980s (estimated) to present	None	Complete RCRA closure as planned.
4. Waste Oil Sump Area	Early 1980s to present	None	No further action is recommended at this time.
5. Hazardous Waste Drum Storage Area	1980s (estimated) to present	None	Complete RCRA closure as planned.
6. Facility Baghouse Dust Collectors	1978 (estimated) to present	None	Perform waste analysis of waste dust to determine if hazardous. If so, sampling may be necessary of all environmental media.

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TABLE 3 (continued)

SWMU AND AOC SUMMARY

SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
7. Wastewater Treatment System	Early 1990s to present	None	No further action is recommended at this time.
8. Former Hazardous Waste Drum Storage Marshalling Area	1980s (estimated) to unknown	None	Complete RCRA closure as planned.
9. Waste Scrubber Liquor Tank	Late 1970s or early 1980s (estimated) to present	None	No further action is recommended at this time.
10. Phenolic Wastewater Storage Tank	Mid-1970s to early 1980s	According to the facility representative, overflows to soil occurred at this time.	Soil sampling should be conducted to determine if contamination from previous releases occurred.
11. Former PCB Storage Area	Early 1970s to mid-1980s	None.	No further action is recommended at this time.
12. PCB Storage Area	Mid-1980s to present	PCB capacitor fluid to floor.	No further action is recommended at this time.
13. Temporary PCB Storage Area	Summer 1984 to early 1985	None.	No further action is recommended at this time.

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TABLE 3 (continued)

SWMU AND AOC SUMMARY

AOC	Dates of Operation	Evidence of Release	Recommended Further Action
1. Aboveground Storage Tank Split-Pipeline Leak Area	1982 to present	AST Gasoline Leak December 1, 1982	Soil testing and tank integrity testing; remediation if necessary.
2. Sulfuric Acid Leak Area	1990 to present	Sulfuric Acid Leak November 6, 1990	Soil testing and remediation if necessary.
3. Abandoned Aboveground Storage Tank Leak Area	Mid-January 1992 to present	AST Gasoline Leak, January 1992	Soil testing and tank integrity testing; remediation if necessary.
4. Diesel Fuel Truck Saddle Tank Spill Area	One-time spill 1991	Broken Saddle Tank on Truck December 1991	Soil testing and remediation if necessary.

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should be remediated. RAI also recommends that hazardous constituent analyses be performed on the waste sand and dust.

SWMU 2 **Former Hazardous Waste Drum Storage Area**

Conclusions: The unit is no longer active. Hazardous waste was originally stored on gravel-covered ground which is surrounded by an 8-foot fence. This unit is intended to go through formal RCRA closure following approval of the closure plan, which has been submitted to IEPA. The potential for future release of hazardous constituents to ground water, surface water, air, or on-site soils is low. The past potential for release of hazardous constituents to on-site soils was low to moderate because the soil was unprotected, although there has been no history of documented releases. The past potential for release of hazardous constituents to ground water, surface water, or air is low because the waste was stored in drums and if there was a spill it would be small in quantity.

Recommendations: RAI recommends the facility complete RCRA closure as planned.

SWMU 3 **Indoor Hazardous Waste Drum Storage Area**

Conclusions: This unit is active and stores drums containing hazardous wastes. The waste is stored indoors, on a concrete floor. No documented releases from this unit have occurred. This unit is intended to go through formal RCRA closure following approval of the closure plan, which has been submitted to IEPA. The potential for release of hazardous constituents to ground water, surface water, air, or on-site soils from this unit is low.

Recommendations: RAI recommends the facility complete RCRA closure as planned.

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SWMU 4 **Waste Oil Sump Area**

Conclusions: This unit is located indoors and the area is constructed of concrete. No documented releases from this unit have occurred. The potential for release of hazardous constituents to ground water, surface water, air, or on-site soil is low.

Recommendations: RAI recommends no further action for this unit.

SWMU 5 **Hazardous Waste Drum Storage Area**

Conclusions: This unit is outdoors and consists of a concrete floor with a 4-inch-high curb around its perimeter. Three walls and the roof are made of metal and the fourth side is a cyclone-type fence. No documented releases from this unit have occurred. This unit is intended to go through formal RCRA closure following approval of the closure plan, which has been submitted to IEPA. The potential for release of hazardous constituents to ground water, surface water, air, or on-site soils from this unit is low.

Recommendations: RAI recommends the facility complete RCRA closure as planned.

SWMU 6 **Facility Baghouse Dust Collectors**

Conclusions: The dust collected from this unit is discharged into a storage hopper where it is mixed with sand and water and transported to SWMU 1. No documented releases from this unit have occurred. The potential for release of hazardous constituents to ground water, surface water, air, or on-site soils from this unit is moderate to high since the waste designation is unknown and no release controls were observed.

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Recommendations: RAI recommends that the waste be sampled for hazardous constituents. If the waste is determined to be hazardous, sampling at this unit for all environmental media may be necessary.

SWMU 7 **Wastewater Treatment System**

Conclusions: This system cleans mill water from the foundry process and sanitary sources, and discharges the effluent into the Illinois River. The treatment system is located inside a building with concrete floors and pit walls. No documented releases from this unit have occurred. The potential for release of hazardous constituents to ground water, surface water, air or on-site soils from this unit is low.

Recommendations: RAI recommends no further action for this unit.

SWMU 8 **Former Hazardous Waste Drum Storage Marshalling Area**

Conclusions: This unit is no longer active. Hazardous waste was originally stored indoors, on a concrete floor. No documented releases from this unit have occurred. This unit is intended to go through formal RCRA closure following approval of the closure plan, which has been submitted to IEPA. The potential for release of hazardous constituents to ground water, surface water, air, and on-site soils from this unit is low.

Recommendations: RAI recommends the facility complete RCRA closure as planned.

SWMU 9 **Waste Scrubber Liquor Tank**

Conclusions: The waste triethylamine scrubber liquor (D002, nonhazardous) flows through pipes, by gravity, from scrubbers located on the second floor to aboveground storage tanks located on the first floor (basement

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level). The tanks are indoors and on a concrete floor. The potential for release of hazardous constituents to ground water, air, surface water, or on-site soils from this unit is low. The scrubber liquor is transferred from the storage tanks to the highway tanker truck by hauling it in a small, in-house (approximately 400 gallon) tanker.

Recommendations: RAI recommends no further action for this unit.

SWMU 10 **Phenolic Wastewater Storage Tank**

Conclusions: This unit stored phenolic wastewater prior to on-site biological treatment. Overflows to exposed soil occurred at the unit. The unit was removed from the facility in the early 1980s. The current potential for release of hazardous constituents to ground water, surface water, air and on-site soils is low or nonexistent.

Recommendations: Soil sampling should be conducted to determine if contamination from the previous releases has occurred.

SWMU 11 **Former PCB Storage Area**

Conclusions: The unit is indoors and on a curbed concrete floor in Building B. All PCBs were stored either in intact capacitors or in drums or crates. Therefore the past potential for a release to environmental media was probably low. The area was cleaned after its use. The potential for release of hazardous constituents to ground water, air, surface water, or on-site soils from this unit is low because the unit is no longer in use and no releases were documented.

Recommendations: RAI recommends no further action for this unit.

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SWMU 12 **PCB Storage Area**

Conclusions: The unit is located indoors on a plastic-covered concrete floor in Building N. Any item which might release PCBs is immediately placed in a drum. Therefore, the potential for release of hazardous constituents to ground water, air, surface water, or on-site soils from this unit is low.

Recommendations: RAI recommends no further action for this unit.

SWMU 13 **Temporary PCB Storage Area**

Conclusions: The unit is located indoors. During its temporary use for storing cleanup debris following a capacitor fire, drums were managed on a plastic-covered, curbed concrete floor. No releases were documented for this unit and IEPA approved the cleanup. Therefore, the past potential for a release to environmental media was probably low. The unit is no longer in use and the plastic floor covering was shipped off site for disposal. Therefore, the potential for release of hazardous constituents to ground water, air, surface water, or on-site soils from this unit is low.

Recommendations: RAI recommends no further action for this unit.

AOC 1 **Aboveground Storage Tank Split-Pipeline Leak Area**

Conclusions: The leak occurred from a split in a pipe that fed gasoline from an AST into the vehicles. The split in the pipe occurred about 10 inches below grade, below the AST, releasing gasoline to the on-site soils. The potential for release of hazardous constituents to surface water and air is low because the split pipe is considered a one-time incident. The potential for release of hazardous constituents to ground water is

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moderate. According to the facility representative, a consultant has been hired to assist with the cleanup of AOC 1. Sampling and any necessary removal and disposal of soil is scheduled for the near future (Caterpillar, 1993b).

Recommendations: The soil surrounding the spill area should be tested for contamination. If soil contamination is discovered, the ground water should be tested for contamination. In addition, the tank integrity should be investigated. Remediation of the area should be performed if necessary.

AOC 2 **Sulfuric Acid Leak Area**

Conclusions: The leak occurred outdoors, and had contaminated an area outside Building RR. The area was cleaned up by Caterpillar personnel, but there is no documentation of the cleanup procedures. The potential for releases of hazardous constituents to ground water, surface water, air, or on-site soils is low because this was an unusual incident and maintenance discipline should eliminate recurrence of the problem.

Recommendations: The soil in this area should be tested for contamination. Remediation of the area should be performed if necessary.

AOC 3 **Abandoned Aboveground Storage Tank Leak Area**

Conclusions: This leak occurred approximately one week before RAI conducted the VSI, and the information available was minimal. A gasoline leak was detected in what appeared to be an abandoned aboveground storage tank. Based on preliminary tests, contamination of the soil was detected. Further tests and remediation will be performed as required. Not knowing what was done to stop the leak or to prevent the leak from recurring, it seems apparent that the potential for future releases

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to soil is moderate to high. The potential for release to ground water is moderate because contaminants in the soil may leach to the ground water. The potential for releases to air and surface water is low because the tanks are aboveground and over 700 feet from the nearest surface water.

Recommendations: The soil surrounding the tank should be tested for contamination. In addition, the tank's integrity should be investigated. Remediation of the area should be performed if necessary.

AOC 4 **Diesel Fuel Truck Saddle Tank Spill Area**

Conclusions: The spill occurred when a diesel fuel saddle tank was accidentally ripped away from a truck. The spill contaminated the soil next to the roadway. Some contaminated soil was removed and disposed of by an outside spill response company. The potential for release to surface water or air is low or nonexistent due to the nature of the waste and the distance to surface water. The potential for release to ground water is moderate because there was no evidence of sampling results.

Recommendations: The soil in this area should be tested for contamination. Remediation of the area should be performed if necessary.

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ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 052 664 364

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Caterpillar Inc.	8826 W. Route 24				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Mapleton	IL	61547	Peoria		
09 COORDINATES: LATITUDE	**LONGITUDE**				
40 33 035.N	89 44 008.W				

10 DIRECTIONS TO SITE *(Starting from nearest public road)*

The facility is located on Route 24 approximately 7 miles south of Bartonsville and 4 miles south of Route 9.

III. RESPONSIBLE PARTIES

01 OWNER *(if known)*	02 STREET *(Business, mailing residential)*		
Caterpillar, Inc.	100 N.E. Adams		
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**
Peoria	IL	61629	(309) 675-1000
07 OPERATOR *(if known and different from owner)*	**08 STREET *(Business, mailing, residential)***		
Caterpillar, Inc.	8826 W. Route 24		
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**
Mapleton	IL	61547	(309) 633-8601

13 TYPE OF OWNERSHIP *(Check one)*

■ A. PRIVATE ☐ B. FEDERAL: _____ *(Agency name)* ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER _____ *(Specify)* ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE *(Check all that apply)*

■ A. RCRA 3010 DATE RECEIVED: 08 / 18 / 80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE *(CERCLA 103 c)* DATE RECEIVED: / / (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

■ YES DATE 01 / 22 / 92

☐ NO

BY *(Check all that apply)*

☐ A. EPA ■ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ *(Specify)*

CONTRACTOR NAME(S): Resource Applications, Inc.

02 SITE STATUS *(Check one)*

■ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1967 (BEGINNING YEAR) | Present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Waste Refractory Coating (D001, F002, U226, nonhazardous), Waste Resins (D001, D002, F002, U122, nonhazardoous), Waste Core Catalyst (D001, D002, nonhazardous), Waste Janitorial Products (D002, nonhazardous), Unused Cooling Tower Chemicals (D001, D002, nonhazardous), Waste Off-Specification Chemical (U226), Waste Triethylamine Scrubber Liquor (D001, nonhazardous), Waste Grease (D008).

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The potential for a hazardous release to the environment from SWMUs 2 through 5 and 7 through 13 is low, since the waste is stored indoors on concrete and/or in drums on concrete pads with curbs. All releases during the process are collected by baghouses for dust (particulates) and special wet scrubbers for fumes. Wastes stored in SWMUs 1 and 6 have not been designated as hazardous or nonhazardous; hence, potential for release to environmental media is unknown from these units.

AOC 1 The past potential for releases of hazardous constituent to surface water and air is low and to ground water is moderate to high.
AOC 2 The potential for release of hazardous constituents to ground water, surface water, air, or on-site soils is low.
AOC 3 The potential for release of hazardous constituents to air and surface water is low. The potential for release to ground water is moderate.
AOC 4 The potential for release of hazardous constituents to air and surface water is low. The potential for release to ground water is moderate.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION *(Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)*

☐ A. HIGH *(Inspection required promptly)* ■ B. MEDIUM *(Inspection required)* ☐ C. LOW *(Inspect on time-available basis)* ☐ D. NONE *(No further action needed; complete current disposition form)*

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF *(Agency/Organization)*			03 TELEPHONE NUMBER
Kevin Pierard	EPA Region V			(312) 886-4448
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Arthur Marshalla		Resource Applications, Inc.	(312) 332-2230	01 / 22 / 92 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD 052 564 364

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- ■ A. SOLID
- ■ B. POWDER, FINES
- ■ C. SLUDGE
- ■ E. SLURRY
- ■ F. LIQUID
- □ G. GAS
- □ D. OTHER _____ *(Specify)*

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TON _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- ■ A. TOXIC
- □ B. CORROSIVE
- □ C. RADIOACTIVE
- □ D. PERSISTENT
- □ E. SOLUBLE
- □ F. INFECTIOUS
- □ G. FLAMMABLE
- ■ H. IGNITABLE
- ■ I. HIGHLY VOLATILE
- □ J. EXPLOSIVE
- □ K. REACTIVE
- □ L. INCOMPATIBLE
- □ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE		80 cubic yards/day	
OLW	OILY WASTE		1000 gallons/month	
SOL	SOLVENTS		300 gallons/month	
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS		3000 gallons/month	
IOC	INORGANIC CHEMICALS		660 gallons/year	
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

EPA Region 5 RCRA files.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	IID 052 664 364

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ■ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — ■ POTENTIAL — ☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: Unknown _____ *(Acres)* — 04 NARRATIVE DESCRIPTION

Based on the four AOCs, further tests are recommended to determine if contamination exists and what areas it covers.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD 052 664 364

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

None identified.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS — ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None identified.

III. TOTAL POPULATION POTENTIALLY AFFECTED: __

IV. COMMENTS

Based on the four AOCs it seems appropriate to conduct further soil tests to determine the extent of contamination.

V. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

Visual Site Inspection, January 22, 1992.

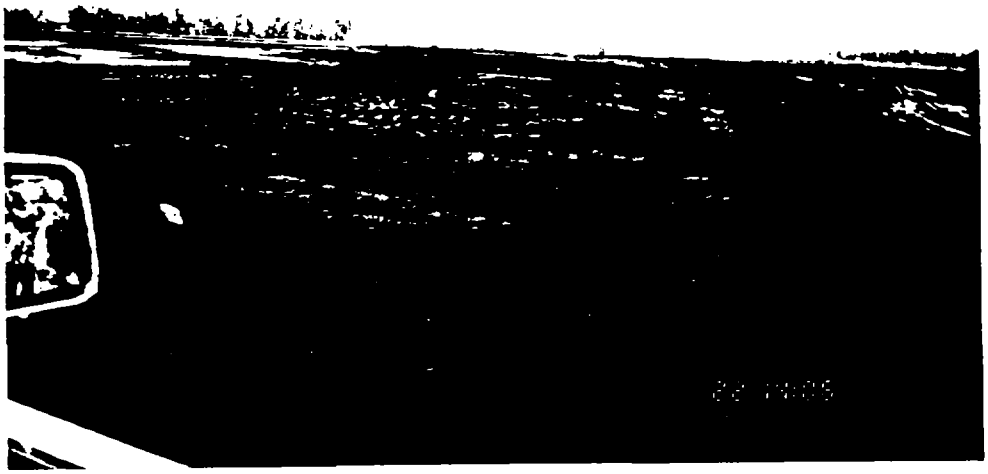
ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

Caterpillar Inc.
Mapleton, Illinois
ILD 052 664 364

Date:	January 22, 1992
Facility Representatives:	Robert Kilgo, Corporate, Environmental Dept. Carey French, Staff Engineer/Facilities Engineering William E. Schulze, Jr., Utilities Engineering Superintendent
Inspection Team:	Arthur Marshalla, Resource Applications, Inc. (RAI) Scott Tajak, RAI
Photographer:	Scott Tajak
Weather Conditions:	Rainy, temperature about 40°F
Summary of Activities:	The visual site inspection (VSI) began at 9:00 a.m. with an introductory meeting. The inspection team discussed the purpose of the VSI and the agenda for the visit. Facility representatives then discussed Caterpillar's past and current operations, solid wastes generated, and release history. Most of the information was exchanged on a question-and-answer basis. The VSI tour began at 1:00 p.m. Mr. William E. Schulze, Jr. discussed specific operations at each area as we walked through the production areas. The inspection began inside at the main plant (Building D). We walked through the entire production line from the core making area, to the molding area (including machining and tooling) to the gray iron melting and pouring area, and finally to the finishing area. In addition to the above mentioned standard production line, there is also a special molding line for cylinder liners. The SWMUs observed during the inspection were clean and well maintained. The tour was concluded at 3:30 p.m after which the inspection team held a brief exit meeting with Caterpillar representatives. The VSI was completed and the inspection team left the facility at 4:00 p.m.



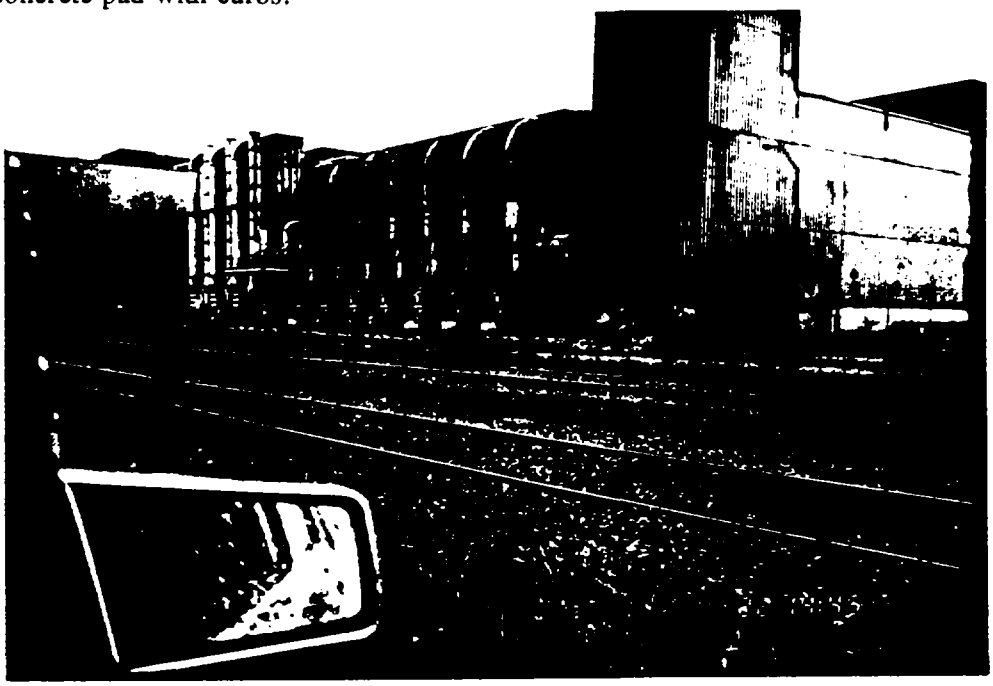
Photograph No. 1 Location: SWMU 1
Orientation: Southwest Date: 1/22/92
Description: Waste Sand Landfill Area.

Photograph No. 2 Location: SWMU 2
Orientation: East Date: 1/22/92
Description: South portion of the fenced-in area of Former Hazardous Waste Drum Storage Area.

Photograph No. 3 Location: SWMU 3
Orientation: South Date: 1/22/92
Description: Chained-in Indoor Hazardous Waste Drum Storage Area.

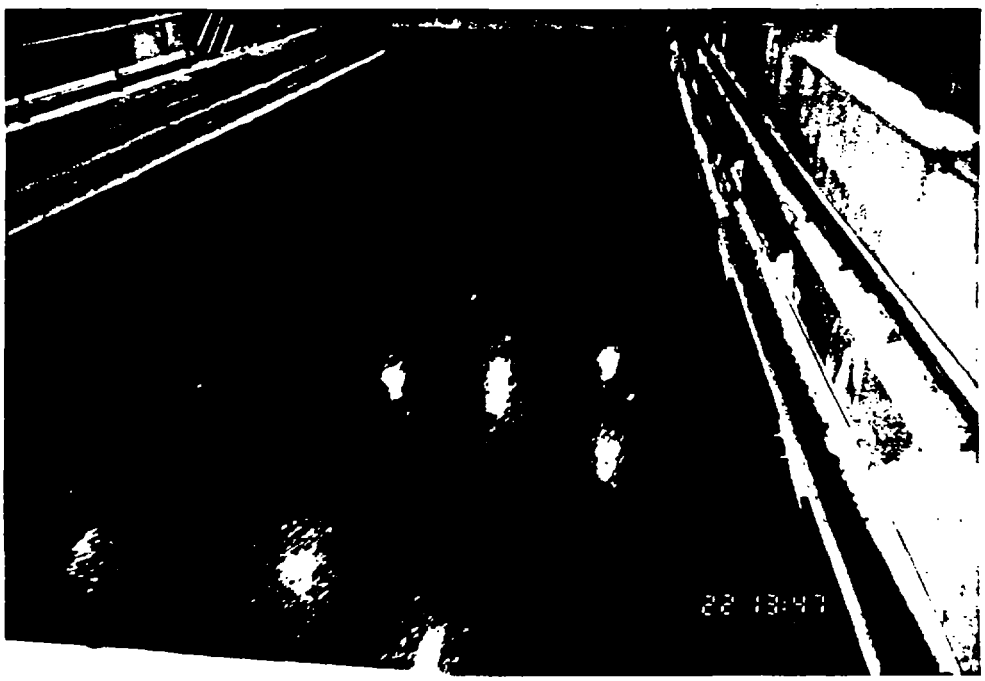
Photograph No. 4 Location: SWMU 4
Orientation: West Date: 1/22/92
Description: Waste Oil Sump Area showing floor grating over sump area.

Photograph No. 5 Location: SWMU 5
Orientation: South Date: 1/22/92
Description: Hazardous Waste Drum Storage Area showing three-sided enclosure with fenced-in front and concrete pad with curbs.

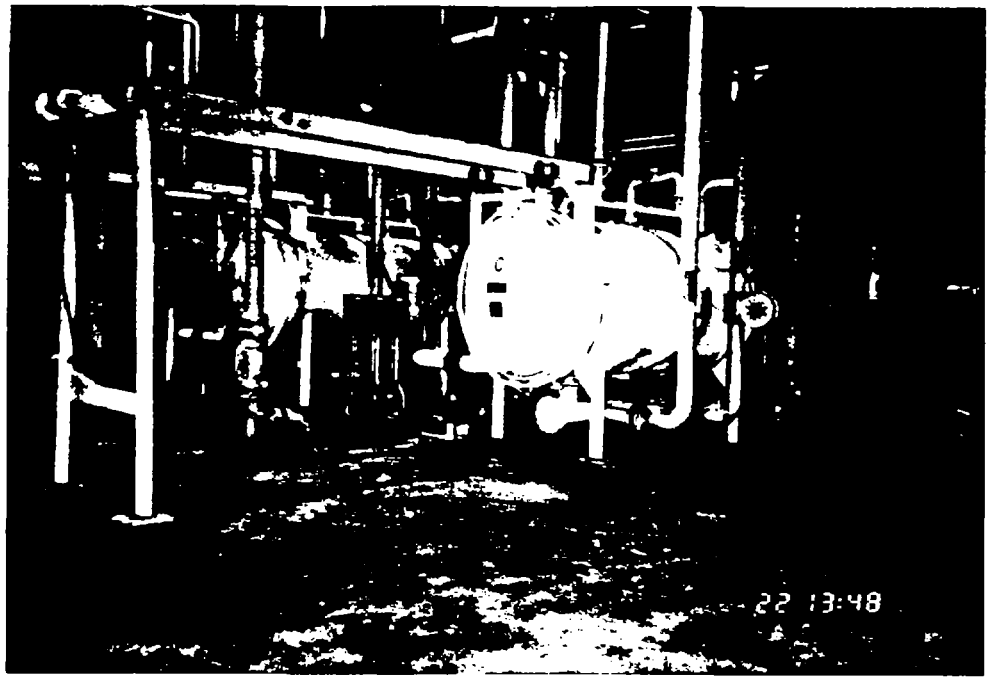


Photograph No. 6 Location: SWMU 6
Orientation: Northwest Date: 1/22/92
Description: Facility Baghouse Dust Collectors on south wall of Building B.

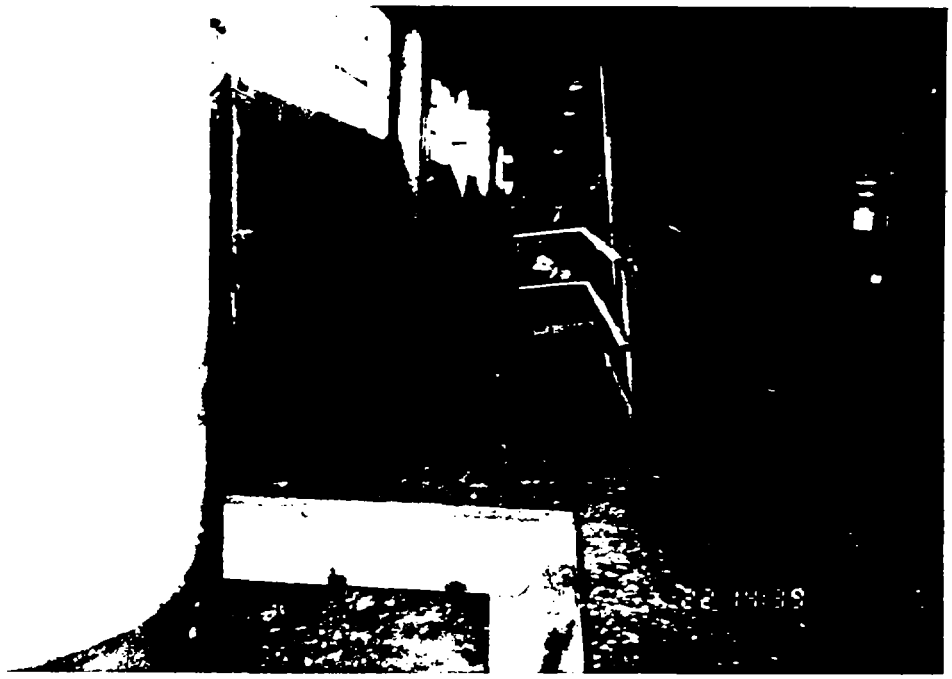
Photograph No. 7 Location: SWMU 7
Orientation: Southeast Date: 1/22/92
Description: Wastewater Treatment System, sludge bay area.



Photograph No. 8 Location: SWMU 7
Orientation: Southeast Date: 1/22/92
Description: Wastewater Treatment System, sand filter area.



Photograph No. 9 Location: SWMU 7
Orientation: Northwest Date: 1/22/92
Description: Wastewater Treatment System, carbon filter area.



Photograph No. 10 Location: SWMU 8
Orientation: North Date: 1/22/92
Description: Former Hazardous Waste Drum Storage Marshalling Area along side the northern wall in Building B.

Photograph No.11
Orientation: East
Description: Location of Sulfuric Acid Leak.

Location: AOC 2
Date: 1/22/92

ATTACHMENT C

VISUAL SITE INSPECTION FIELD NOTES

CAST PARTS

- SAND As forming media

several types

Green sand - silica

... sea coal } outside of casting

... bentonite

mold - internal old-

cured with gas

polymerized

rigidity - bond between water, sand, and c

mold - is the outside passage

core - form inside passage

Facility makes molds and cores as well as product

Only pour gray iron

alloyed gray iron

↳ nickel

↳ molybdenum?

↳ copper

Cast iron is basic product,

engine - cylinders, block, cam shafts etc.

OEM personnel

ST

1

880,000 ft²

4 major areas of a foundry

A) Core
2 floors

incoming - raw material

1) lake sand
2) silica sand
3) resin + specialty

truck unloaded on conveyor
stored in silos
out of silos
mixed sand and resin
distributed to 2nd floor to hoppers
sand is now workable mix
shape formed
blow sand into cavity of box
then it is cured via a gas or heat
core cleaned
place refractory coating
sea coal
bentonite
fills voids provides binder for
metal and sand seal
liquid coating
dipped - water based
heated/dried

ST.

Cores – some are air dryed.

First floor - series of core machines
they make 50-60 different parts

Smaller engines assembly in this area.

come off in racks or preassembling into another core
called a Capsule or assembly.

One casting ~~not~~ may take several different
casting

* (B) Molding Area

3 large Mold lines
a) blocks
b) Cylinder head
c) cylinder liners

1 Pattern Shop

machine shop.
tooling
core boxes and shape designs (patterns)
machining
repair work

maintenance shop - equipment care
sheet metal, machining, welding S.T.

Green Sand mold area

half a pattern
flask open both top and bottom
squeeze sand
become rigid
pull it off pattern rods
cores put in cavity
then it goes to pouring area

Sand conveying
after casting sand is returned back
screened
added water + binder

cores do not get reused - mixed back into sand
simply

Outside of sand is

landfill - the only thing that stays in
casting - inert material.

2 parts
a) make mold
b) send pattern
back to molding machine

similar for all 3 green sands

S.T

liner sleeves - castings without cores
more alloying - basically cast iron

poured casting

molten metal

(C) Metal Melting

raw material
by bunk
steel scrap from any suppliers or from machine shops
from outside sources < turnings from machining
borings - small chips from cast iron machining
plate scrap.

50% of every casting returned

runner system to distribute to various holes to produce good casting

that is all steel metal is returned to melting

melt in induction furnace
or
arc furnace

S.T.

a) induction furnace (2)
current on coil
induce current in metal
heat the melt

b) arc furnace (1) holds 24-ton
big pot
3 electrodes
strike an arc between inductor and metal
arc - melts metal on contact

melt - primary (arc)
24 ton batches
pour it into induction furnace to
bring up to temp and add alloys.

holds 65 tons

metal holding furnace - simply holds metal at
temp. so that it could be
distributed in smaller batches.

Dust collection / fume collection
depends upon the area

core area
dry sand - baghouse
core processing - wet scrubbers
caustic → SO_2
acid - Nitrogen / CE

S.T.

molding area
wet scrubbers
demister vanes

river water that is obtained
not drinkable

some on effluent ventilation

Melting area
baghouse - furnace

Finishing
baghouse - dry

Back to furnace
from holding
sent to casting
put on conveyor

Cooling of casting above 2nd floor
3 to 4 hours.

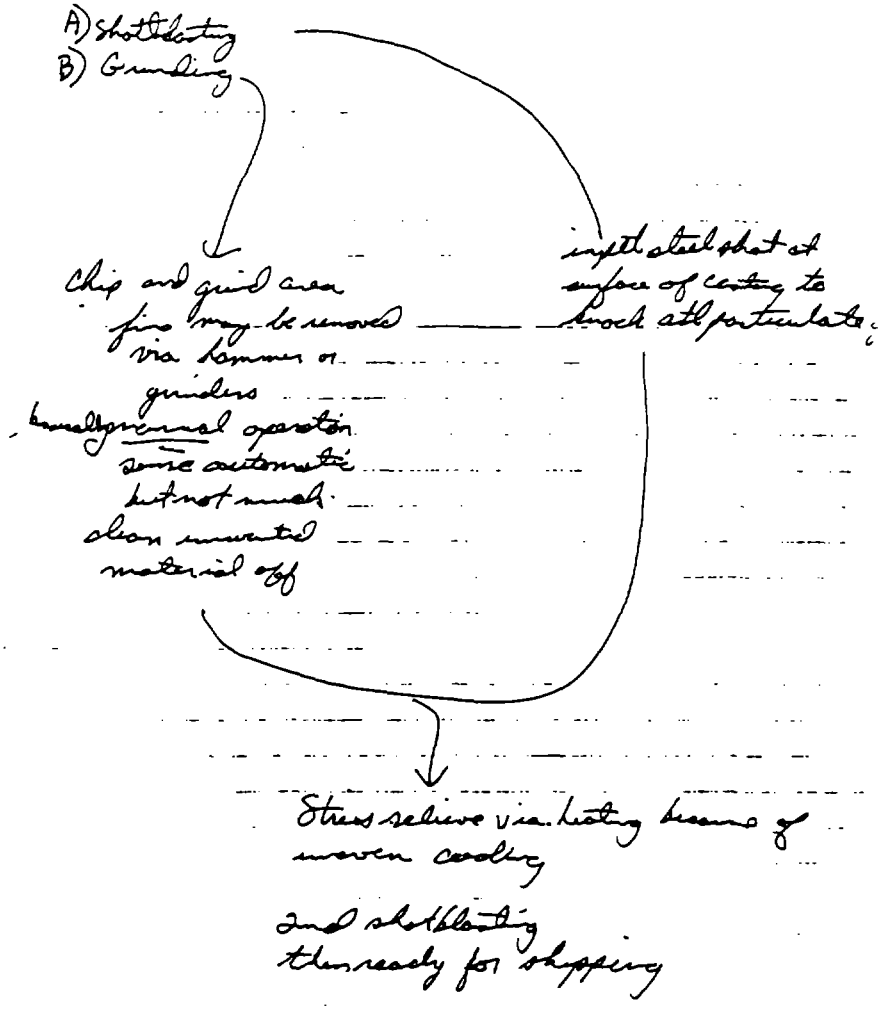
takes it to

Finishing Operation
Sandfall part

S.T.

No masking or coating here

A) Shotblasting
B) Grinding



S.T.

(B) Stress relief – no [illegible] to Lafayette
in specialty

automotive repair

day shift – casting
2nd – core
3rd – full production

3 shifts 5 days a week

4 other areas

a) manufacture experimentation
they can make small molds.
No cleaning

b) mini-mold area
some camshafts & cylinder heads.
cleaning, grinding

(C) 3500 block area
16 cylinder version
make core and mold
bolted together
pour metal in here
it comes out as complete
no optional guess work mold

Last mold line
- ~~Large engine~~
- assembly of core
- pour mold/cast
- may sit a week to cool
- after cooling, blast it
- chop and grind
- no stress relief done because of gradual cooling
- ~~sent~~ sent to landfill.

Creek - runs through facility

NPDES permit
WWTP

Boiler house & heating plant
has not been used in several years
Building N is not in use.

Building R → Sanitary treatment
Drinking H2O plant
2 water towers
- drinking
- process water
no wells on site
found to be of poor quality

Building V → receiving building
designated space
- flood - drum waste material

S-7

Y-16 → RCRA storage for drums.

Building P – empty
– originally construction/garage
– part of investment foundry
casting for my precise parts
form it out of wax
wax covered ceramic

– was nonhazardous

Building Q – electrical
Building Y4 like "LPG" bottles
Y2 – industrial X-ray building
check for defects

Y-6 – small pump house
Y-7 " "

Y-3 – Y-5 lagoon
it is without out
pumped to main property

RCRA HW storage area within B. } not in use –
fenced yard south of Q } will go thru
closure.

1) LANDFILL - 82 acres - liquid - top anyone smaller
2) Pond for slurry material - lagoon
3) 4 RCRA sites
4) Building RR = sludge WWTP
special waste
5) SO_2 - TCE scrubbers
waste liquids
TCE scrubbers
pumped in tanks into trucks
by gravity
Mossville - East Peoria
transport SO_2 liquid for reuse
6) foundry process chemicals
handled in drums
off-site
incineration

RCRA - Special Waste

Spills

① NRC - PCB - free June 4, 1984

② Caustic cleaning solution on concrete (1983) Feb 4, 8
unknown

③ gasoline - pipeline leak 12/1/82
pipe split dug up
pipe that fed into pumps for vehicle
gas line shutoff

S.T.

4) Inside Building Boy 6/23/82
coating
counterweight
rubber plastic bladder with mercury
storage - onto floor area
collected mercury.

8 to 10 inch concrete
some wood block over concrete

5) Small gasoline storage tank 3/22/82
discharge pipe
gasoline on concrete pad
plugged opening
absorbent/pillow
no release to soil or water

6) WWTP - Building RR 11/7/90
feed acid into concentration tank
line
sulfuric acid to pad and
soil
soil sent off-site

own expense team

7) December.
diesel truck 12/19/9
ripped off saddle tank
trucking company
they cleaned it up.
a little soil pulled up.

C – USTs on the property

UST 1 – detection equipment – 70s (check UST FILING)
steel ?
10,000 ? PUMP

UST 2 – EMPTY – FUEL OIL (check UST filings)

UST 3 – Diesel leak detection

UST 4 – TRIETHYLAMINE – leak detection

UST 5 – Triethylamine – removed ~~early 1980~~ ~~mid 1980s~~ Prior to May 85

UST 6 – Core resins Prior to May 85

UST 7 – hardcore resin prior to May 85

(margin: local portable ... ARC ... B ...)

S.T

(1) Triethylamine (TEA) EAST UST ground leak detection

— (@) Saddle Tank accident/location soil removed.

(2) Gasoline North
~~[illegible]~~ Tank leak on legs outdoor

(3) Acid leak area EAST

(4) Sand filters — inside (RR) - ~~E~~ SE

(5) ~~B~~ Carbon filters NW (RR)

(6) Sludge Bay SE (RR)

Heating plant

(7) UST(3) going to be removed
diesel concrete
broken
Sampling holes.

(8) West lagoon silt

(9) South UST

(10) West Ditch from WWTP
15

S.T.

(11) SW Landfill — SWMU1
filled in at 06 Corner
Hole left in SW corner,

(12) near X-ray building — Y-Co
PCB soil remediation area
SE

X-ray building
photo developing
waste
silver,
goes to silver reclaimer

SWMU-2
(13) SEE — HAZ Storage - INACTIVE
(14) 90 X 80
ground

SWMU3
(15) South Central
Clay storage Area
Approx 30 X 60

SWMU4
(16) Waste Oil Sump
approx 2000
West

ENVIRO-5

17. 416 Active Haz Area
more flammable
approximately 15 drums.
Concrete
ramp.
~~curbed~~ berned - 5 inches
covers
South

(18) North PCB spill
Floor is where it was spayed on.

(19) Fuel pumps were
~~island~~ SW

(20) TEA - underground tank UST
North

(21) Former Marshalling Hangar (Accumulation
North short term.
5 X 40

(22) UST Main tanks
North

(23) Rain Tanks – North

(24) WWTP (outside view)
South West

(25) Spill from truck accident (W)

(26) UST – (~~S~~ N)

(27) trucks accident (W)

Foundry Tour

(28) West – Stencil Fortis Cleaner
3 or 4

Slag metal reclaimer

(29) Line 2 pouring zone
looking West
slag on floor
Port Costa reclaimer
rest Costa melting unit

18

S.T.

Vehicle Wash Down area

30 ~~Put in barrel~~
solids ← only
liquid - sewage treatment
→ Northgate sewer

sump goes into sewer acid alkaline sewer
South

31 Scrap iron / metals
Broken tools
South

SF